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ABSTRACT

This case study explores the role of educators in educational facilities planning and construction and discusses the different agendas and perspectives people bring to the development of educational facility specifications. It describes how cooperation and input among stakeholders resulted in a Massachusetts community college was built in 18 months, under budget, and with less than 1 percent change orders. Chapters provide background information on the college, the educational planning and specifications process, the phases of the design process, school construction issues and management, and user interviews about the outcome. Study conclusions are discussed as are recommendations on the planning process to ensure user involvement and input in the final facility, and improvements to the facilities planning process. Appendices provide copies of study and project documents. (Contains a 140-item bibliography.) (GR)

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THE ROLE OF EDUCATORS IN EDUCATIONAL FACILITIES PLANNING: A CASE STUDY OF THE PLANNING PROCESS

Terrance Bernard Neylon

An Analytic Paper Presented to
The Faculty of the Graduate School of Education
of Harvard University
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

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TERRANCE BERNARD NEYLON

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DEDICATED
TO

MY LOVELY WIFE JUDY
AND MY FOUR WONDERFUL CHILDREN:
KATHRYN, SUZANNE, MICHAEL AND KEVIN

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My deepest appreciation to the many people who made a change forever in my life:

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ABSTRACT

The role of educators in educational facilities planning and construction is explored and analyzed in this case study of the planning, design, and construction of the Lynn campus of North Shore (MA) Community College. The case study is, in many ways, the story of the interplay of people with different values engaged in a continual process of change and problem-solving. The paper discusses the different agendas and perspectives people bring to the political tug of war that exists as educational specifications are developed and transformed from words and numbers into steel, glass, and brick. Specifically, the paper describes how a community college was built in eighteen months, under budget, with less than one percent change orders. All this occurred amid the chaos and upheaval of the early 1980s in Massachusetts.

The argument is that the concerns and values of educators are essential in the design and construction of facilities in order to maximize the effectiveness and utility of those facilities. A second argument is that the values of educators are more likely to be manifested in the completed facility when those values are actively represented from the beginning of the planning process to the end of construction. This study focuses upon the role of educators within the facilities planning process,

highlights specific instances involving conflicting values, and shows how issues were resolved.

A listing of chapter contents follows: One--nature and methods of this research; Two--introduction to the history of educational facilities and the origin of the community college system in Massachusetts; Three--educational planning and the educational specification document, its content and preparation; Four--the continuing representation of educators in working with the architect in the preparation of the design and construction documents is explored; Five--the construction process is detailed, emphasizing educator input; Six--a description of the final facility with interviews of current users seeking their perceptions on the usefulness of the facility and the planning process; Seven--conclusions and recommendations for future educational facilities planning efforts seeking to maximize educator involvement and representation throughout the process.

CHAPTER ONE

INTRODUCTION

Nature of This Research

School and college buildings are decaying and crumbling. To correct this problem, billions of dollars will be spent in the near future on the renovation and construction of educational facilities. Despite the wealth of planning information and the common belief that "*form follows function*" in facilities planning, little research exists on how the educational function is defined and how this information is translated into the form of educational facilities.

When a building is being considered for construction or renovation, people bring very different perspectives to the process. How do the perspectives of educators differ from those of architects? How do the perspectives of engineers differ from those of politicians? After a facility is completed, how do those who use the building perceive it? These perceptions are part of and influence the process of planning, designing and constructing or renovating an institution of higher education. It is important to understand these perspectives and how they dovetail with the planning process so that the process incorporates them in such a way that the ultimate facility best meets the needs of its eventual users.

How do the values held by educators, engineers, architects, and politicians manifest themselves in the planning/construction process? Architects may design spaces that are aesthetically pleasing, but which are ineffective for instruction. The essential question is: *"Who will be involved and what perspectives should be incorporated into this process?"* This study focuses on the integration of the perspectives of educators into the planning, design, and construction of one institution of higher education, the North Shore Community College Lynn Campus.

This study is in many ways the story of the interplay of people with different values engaged in the process of change and problem solving. The paper discusses the different agendas and perspectives people bring to the political tug of war that exists as educational specifications are developed and transformed from words and numbers into steel, glass and brick.

The argument is that the concerns and values of educators are essential in the design and construction of facilities in order to maximize their effectiveness and utility. A second argument is that the values of educators, the ultimate users, are more likely to be manifested in the completed facility when those values are actively represented from the beginning of the planning process to the end of the construction. In order to ensure the continual infusion of educator values in the planning of the

the Lynn campus, educators had input when the facility was designed; when questions were raised, and when design changes were needed. This extensive involvement of educator thought and review separates this project from other educational planning and construction projects. This case study focuses upon the role of educators within the facilities planning and construction process, highlights specific instances involving conflicting values, and shows how issues were resolved.

In addition, the function of the facility reflects almost totally the expressed wishes of the users and is judged as highly supportive of their activities by current occupants. This paper argues that this unusual result occurred because of the unique process employed in the planning, design and construction of the facility. The philosophy which guided this process rested on the fundamental belief that the users of this projected facility have the best insight and recommendations on its structure and design. As a consequence, the needs and desires of the users were sought, analyzed and documented in the educational specifications. Just as important, the role of the educators in the facilities planning process did not stop upon completion of the educational specifications. As a result of this study, it was determined that during the design and construction phase the educator's values need to be represented constantly or other values may intervene. It

is shown in this paper that during the design and construction phases the values espoused by educators as contained in the educational specifications document come under attack by the sometimes conflicting values of architects, contractors, and politicians. This project yields many general and specific lessons and recommendations about planning educational facilities which are detailed in the conclusions section of the paper.

The role of users in the planning and design of educational facilities is the focus of this investigation. To shed light on this issue, I studied the facilities planning process of one institution, the North Shore Community College, and focused on a single question:

> What were the roles of users in the planning, design, and construction of North Shore Community College in Lynn, Massachusetts?

This study seeks to record and analyze events and procedures that occurred during the planning and design of the Lynn Campus. Upon analysis of this information, the study further strives to gain insight into the causal relationships between the eventual users of these facilities and the ability of the completed facility to meet the needs of those users.

I will investigate the process of facilities planning employed at North Shore from conceptualization through

construction. To assess the operational suitability of the completed facility from the user's viewpoint, the study includes a follow-up examination of the current use of the facility. I will determine the extent to which and the means by which the experience of users was integrated into the planning process. I will report on communications between users and architects, how user views were reflected in the design of the facilities, and the degree to which users felt their insights and experiences affected the final results.

The study will address the following questions:

1. What were the key components in the preparation, evolution, and implementation of the educational specifications document that led to the construction of the Lynn Campus, and how did these reflect user input?

2. Was the facilities planning process employed in the design of the Lynn Campus of North Shore Community College successful from the users' viewpoint? If yes, why? if no, why not?

This study and its conclusions should benefit educators who will be responsible for new facilities planning but who may have little information about that experience. The topic is timely, important, under-investigated, and will be of interest to both higher education and public school personnel who seek to implement and participate in the process of improving the decaying educational environment-

the foundation upon and shelter within which we teach.

Central to the facilities planning process being studied in this paper are the definitions of users and educators. For the purposes of this paper, users are defined as those persons who work in the completed facility. Users include faculty, custodians, secretaries, librarians, deans, students and others. This study focuses primarily on the role of educators in the facilities planning process.

Educators are defined as all personnel involved in the instructional process (e.g., registrar, academic dean). Educators, as defined, form a subset of the user group.

During the planning of the Lynn campus of the North Shore Community College the views and ideas of the users were solicited, since their functions impacted to a greater or lesser degree on the instructional process. Since the facility under study here is an institution of higher education, the predominant focus is on the role of educators in the planning process. The role of those who teach, the faculty, represents the main focus within the group of educators.

Methods of this Research

Rationale for Case Study Methods

In order to most effectively relate the story of user participation in facilities planning, I used the case study

method. First, the study focuses on the facilities planning process that accompanied the building of the Lynn campus of North Shore Community College. This facilities planning project was undertaken during the years 1978 to 1985, and is examined in detail. Second, I report in detail on the relationships between the planning events and the contemporary context within which they occurred. Third, I will pursue a wide range of sources, including direct interviews, documents, media reports, and college publications that dealt with the planning and construction of the facility. Fourth, regarding decisions that were made during the process, I sought answers to these questions: Why were these decisions? How were they implemented? and with what results?

Justification for Site Selection

The Lynn campus of North Shore Community College was chosen as the research site for several important reasons. First, the construction of the Lynn campus provides a situation which illuminates educator involvement in campus planning and design. Second, the planning, design, and completion of the campus met or exceeded standard measures of success. In addition to receiving high grades for successful linkage of educational program needs and facilities design, the campus was built in eighteen months, under budget, and with less than one percent of a change in

work orders--amid the chaos and upheaval of the early 1980's in Massachusetts.

The new campus is located in the downtown area of Lynn, one of Massachusetts' older, larger, and more economically depressed cities. The underlying issues and problems associated with the initiation of an urban college are nationally important; both in practical and educational policy terms.

Finally, I worked at North Shore Community College continuously during all phases of the project including program development, construction, and initial occupancy. As Assistant to the President for Facilities Planning, I coordinated the entire planning and construction process and served as the institutional representative and contact between the educational users and all outside personnel, including architects, engineers, contractors, land owners, lawyers, and government officials.

While my professional involvement poses some problems in terms of potential bias (see **Safeguards Against Bias and Error** on page 11), the problem is offset by the advantage of the perception of someone on the "*inside*" rather than outside of the case study. My familiarity with the total process allows me to probe beyond the initial responses during interviews and enhances my ability to conduct a more thorough analysis. In addition, the fact that I am a former colleague of most of those who were interviewed for this

study has enabled me to "*establish a good working relationship... that is open and relaxed, and marked by trust and rapport*" (Murphy, 1980, p. 87).

Until recently, I worked at the Massachusetts Board of Regents of Higher Education. This position, along with my ten-year experience at North Shore, afforded me direct access to all documents for review and analysis as well as all individuals interviewed, both internal and external to the college. Further, my extensive personal files on the project contain progress reports, budgets, photographs, newspaper articles, legal and technical documents.

Before identifying the key aspects of the planning process, I developed a step-by-step chronology of the entire planning process. This consisted of establishing who was involved, the nature and substance of their contribution, what policies and statements were important to the process, at what level and when decisions were made, and in what form views and decisions were transmitted. In order to accurately describe the planning process, I collected, examined, and analyzed college documents such as mission statements, academic plans, related memoranda, meeting minutes, media reports, correspondence, records, and design and construction records as well as meeting notes. These documents are referenced in the following chapters.

A major source of data was a series of on-site unstructured interviews during which I audio taped the

conversations. This procedure was standard for all interviews. More than fifty one-hour interviews involving faculty and staff, administration, politicians, public officials, engineers and architects, were conducted during the years 1989 to 1991. My ten years of direct involvement with the case assisted me in data gathering, examination of the phenomena under study, and detecting the important causal links within the study. As Patton has stated (1980, p. 43): *"Qualitative research designs require that the evaluator get close to the people and situations being studied in order to understand the minutiae of program life."*

Data Analysis

I examined the collected materials looking for consistencies and discrepancies that surfaced. As I explored the data my hope was to be challenged by the new questions distilled from it. Strauss (1987, p. 17) describes the process of generating questions as *"essential to making distinctions and comparisons; thinking about possible hypotheses, concepts and their relationships; sampling, and the like."* Murphy (1980, p. 131) describes analysis as *"drawing inferences about what the data show, mean, explain, and imply."*

As I examined the data, I classified them to show their placement within the facilities planning process using

categories such as motivation, personal recollections, inputs, explanations, professional relationships, procedural involvements, and thematic views. I was looking for themes or *"those principal ideas that recur throughout the data"* (Murphy, 1980, p. 141). I was particularly conscious of cross-checking personal recollections, against documented data and evidence. In some instances this comparison exposed faulty recollections while in others it revealed inaccurate documentation. The key goal in the analysis of these multiple sources of information was to establish an accurate picture of the events and ideas that occurred at the time. I worked to *"carefully assess each piece of data by checking the data through multiple sources"* I sought to *"triangulate the data by using multiple methods to further corroborate important points"* (Murphy, 1980, p. 69).

Safeguards Against Bias and Error

Any case study exposes the author to bias and potential error. This paper, in particular, carried those risks because of my direct involvement in most of the events being reported. To guard against bias or error, I worked to hold my opinions and conclusions in check and detach myself from the study. Documents were not taken at face value. Instead they were cross-checked against other pieces of related data and information. Becker (1970, p. 79) stressed, *"the observer must inquire carefully into how the documents he*

works with are created: by whom, following what procedures, and for what purposes." Each piece of information collected was tested for plausibility and consistency. Different faculty members and administrators were interviewed on specific points of interest, and their accounts were cross-checked to see if the pieces fit together. Further verification and corroboration of my recollections, especially those components of the process external to the college, was sought by checking those recollections with the architect, engineers, contractor and public officials. Also, official records, meeting notes and documents were used to cross check and document my findings and challenge my conclusions. Additionally, I shared my findings and conclusions with several people involved, including Thomas Wisby, John Costello, David Adams, and Ronald Tagney. I welcomed their critical review and made changes to correct inaccuracies. Where differences in recollections or opinions were encountered and not resolved, they are reported as such. Murphy (1980, p. 72) states: *"bias and error can be reduced by sharing the penultimate draft with the key individuals whose program is the focus of the evaluation."* The penultimate draft of this paper was shared with and reviewed by, and extensively commented upon by Dr. David Adams, who was responsible for the academic programs during this planning process.

CHAPTER TWO

BACKGROUND

Nature of the Facilities Problem

American higher education today is threatened by the deterioration of its buildings and infrastructure. During testimony before the U.S. House of Representatives Subcommittee on Postsecondary Education of the Committee on Education and Labor, David Helpern (1987, p. 1) reported:

> *"Among the most serious--and least recognized--of the problems currently facing institutions of higher education is the condition of the physical plants. No matter the age or size of the institutions, each must contend with physical conditions that adversely affect the quality of teaching and of resources--even the quality of life--on its campus."*

Facilities constitute a major portion of higher education's capital, an aggregate over $300 billion based on an average replacement cost of $101 per square foot (Rush and Johnson, 1989, p. 23). Based on data from a survey co-sponsored by the Association of Physical Plant Administrators of Universities and Colleges (APPA) and the

National Association of Colleges and University Business Officers (NACUBO) Rush and Johnson, in commenting on maintenance costs, concluded:

> *"Colleges and universities across the United States have accumulated a backlog with a potential total price tag of up to $60-70 billion. Despite the urgent need of capital renewal and replacement, the survey found that colleges and universities are deferring $4 for every $1 spent on maintenance in 1988 budgets."*

Further, David Helpern (1987, p. 4) suggests that when institutions attempt to reverse this facilities deterioration, the enormous amount of fiscal resources required will substantially impact many other campus activities. He specifically stated:

> *"... in the next 5 years, maintenance demands will cut into allocations for academic programs, either producing a loss of academic quality or giving officials the option to teach and have the campus crumble."*

In addition to the above consequences directly attributable to facilities deterioration, there are also implications regarding student recruitment and academic programs. ***Change*** (January/February, 1986, p. 29-32)

reported results from a 1984 Carnegie Foundation for the Advancement of Teaching survey, entitled, ***How Do Students Choose A College?***. The Carnegie study surveyed 1000 high school seniors asking what source of information they used most frequently in selecting a college to attend. The campus visit was rated number one. When students were asked what influenced them most during the campus visit, 62% said, *"appearance of the buildings and grounds."* The survey results clearly suggest a direct relationship between the condition of the facilities and grounds and successful student recruitment.

The National Science Foundation's *"Survey of Scientific and Engineering Research Facilities: 1988"* concluded that nearly 39% of current organized research space in academic institutions is in need of repair or renovation. Further, they estimated the cost of today's facilities needs for research space alone to be $3.6 billion (***Scientific and Engineering Research Facilities at Universities and Colleges: 1988***).

In the Fall of 1989, the faculty of Stanford University erupted in revolt over the issue of overhead charges levied against their grants. The April 20, 1990 issue of ***Science*** (p. 292) reported: *"The tinder for the explosion was the news that Stanford's overhead -- already among the highest in the nation at 74% -- would rise to 84% by 1993."* At Stanford -- like many other institutions of higher education

-- the cost of new construction as well as the operational cost to maintain the buildings is charged against research grants in the form of overhead charges. This practice of *"full cost recovery"* is in accordance with federal guidelines, however disastrous it may be to academics and research. Speaking on this issue, chemist James Collman of Stanford stated his colleagues are willing to do without new space and added: *"Unless you can find a way to build the building and not increase the overhead, just don't build the buildings, we'll have buildings and nobody to work in them"* (p. 292).

Clearly, the problem of educational facilities planning, design and construction is multi-faceted. The solution, though difficult, will require the combined effort and in-depth thought of all involved if the solution is to truly solve the current problem.

During the 1980's dozens of reports highlighted the declining quality of education in the United States at all levels. As educators strive to improve the quality of education in response to these reports, the facilities deterioration issue assumes major importance. Ernest L. Boyer (1988, p. 15), speaking on this issue, stated: *"You cannot have a core of excellence in higher education if you don't demonstrate a commitment to facilities. It's time to recognize that facilities provide the centerpiece around which all other functions in higher education take place."*

Thus, one could posit that, if the school reform movement that gained prominence with the publication of *A Nation At Risk* in 1983 is to be fully realized, then educators must address facilities needs in concert with the academic needs and standards of our schools. The intimate connection between educational quality and educational facilities is reflected in the contemporary publication of *A Nation At Risk* and *The Decaying American Campus: A Ticking Time Bomb*, both in the 1980's.

Billions of dollars will likely be spent in the near future in addressing the facilities deterioration problem. Although this problem is multi-faceted, two essential concerns are renewal of existing facilities and construction of new facilities. In both instances, the effectiveness of the facilities will be largely determined by how well they respond to the educational program of the institution--by how well its form addresses the educational function. If educators are to maximize the potential of the enormous resources required to address the reported facilities crisis, then the response to the problem must not be left to the planners and architects alone. But rather, educators must be intimately involved in all steps of facilities renovation and facilities construction. This case study will support that assertion. Educators, both faculty and administrators, should understand the implications of leaving to others decisions that may possibly shape and

determine the future ability of their institutions to fulfill their educational missions.

For What Purpose Do We Build?

In seventeenth and eighteenth century America, educational facilities were viewed as simple and utilitarian places where teachers would instruct students in a sheltered environment. When schools were built, local craftsmen applied their trade with little or no direction from educators. As explained by David B. Tyack in his book, *Turning Points in American Educational History* (1967, p. 4) the thoughts of the local craftsmen were not necessarily focused on education.

> *"When the Puritans created schools, they sought to reproduce what they remembered of education in England. Neither schooling nor architecture did the settlers innovate; nostalgia and fear of barbarism prompted them to imitate. Harvard was based on its model, Emmanuel College in Cambridge, where many of the leading colonists had been educated. The classical curriculum and customs of the Latin grammar schools followed English precedent. And the dame school, in which housewives taught children to*

read in their homes; resembled those in countless villages in England."

What is important in the words of David Tyack is that from the birth of this nation the form of educational facilities has been determined not by what goes on inside them but rather by tradition. Further, Carl F. Kaestle in his book, *Pillars Of the Republic Common School and American Society, 1780-1860*, (1983, pp. 13-14) reports:

"When one investigates the actual history of district education the first image that crumbles is that of the "little red schoolhouse," high on a hill and surrounded by a meadow. Schoolhouses of this period were not red; they were log or unpainted clapboard. Nor were they in idyllic locations. Cleared land was scarce, and schoolhouses were usually located on plots that were good for nothing else, often next to highways or on swampy grounds."

Here again a review of this nation's early history exposes the rationale behind the planning of educational facilities and again, the transfer or acquisition of knowledge is not the central issue in the planning process.

As the nation grew, many rural farming areas began to

change and, over time, these changes exposed the limitations of the one room school house. In Massachusetts, educators began to express the need to separate students into grade levels and argued for larger and more complex educational buildings. In response to the demands of the increasing population and the new educational requirements, a major breakthrough in educational facilities planning and design resulted. The Quincy Grammar School was planned, designed, and constructed in Boston in 1848. The form of the Quincy Grammar School was designed by architects when it became apparent the educational requirements (function) of the new school building went well beyond the ability of local craftsmen.

Edward P. Cubberly (1948, p. 9) provides a detailed description of the Quincy Grammar School when he writes:

> *"This building formed a new architectural type which was extensively copied, in Boston and elsewhere, and this new building, with its twelve classrooms, assembly hall, and a principal's office, was thought by many to represent such an advance that little improvement would ever be made on it. For the next fifty years it was the standard type of elementary school building erected in our cities... this was in large part due to the fact that this type of building was so well*

adapted to a drill--and content type of course of study, which from about 1850 to about 1900 was the dominant one."

During most of the nineteenth century, architects designed educational facilities with little or no account for the functional aspects of the curriculum.

Alfred Roth (1857, p. 26) in his book, ***The New School***, describes how architects viewed schools as monuments of architectural style, lacking in educational thought and human scale.

"... Schools were either castles or palaces and their architectural style either Gothic, Renaissance, or Baroque, or a combination of styles. Whatever their shapes or forms were, they in no way resembled a school (in the functional sense). The child's own scale was not taken into consideration, either practically or emotionally. Out-sized entrances, corridors, stairways seem to be particularly selected by the architect for his "artistic" effects with the well meant aim of contributing to the child's education in art. It would be wrong and unfair to blame the architect alone. The absence of unbiased pedagogical conceptions, and of a curriculum

based on them were as much a cause of mistaken evolution, as was the lack of close collaboration between the architects, educator and building authorities."

The fact that over the years a tremendous amount of public funds has gone into the design and construction of numerous school buildings that evolved from the minds of architects and not the educational requirements of educators justifies the use of the words--mistaken evolution. The failure of educators to develop and monitor thorough and detailed educational specifications essentially relinquished to designers decisions may well have affected the ability of institutions to carry out their educational mission.

The Genesis Of The Community College System in Massachusetts

Since this study deals with a specific campus of the Massachusetts Community College System it is important to understand both the origin of that system and the history of how it constructed its facilities.

The growth and development of American Community Colleges is described by William Deegan and Dale Tillery in their book, *Renewing The American Community College*. Of particular interest to this work is the unfolding of the community college system from the first high school prototypes to the comprehensive community college of today.

Examination of the prototype reveals four developmental periods, or generations during the metamorphic process.

Generation 1: Extension of High School (1900 - 1930)

Generation 2: Junior College (1930 - 1950)

Generation 3: Community Colleges (1950 - 1970)

Generation 4: Comprehensive Community Colleges (1970-mid 1980's) (1985, p. 5).

The four generations describe the continuing growth of the community college as an emerging institution in higher education and give rise to a fifth and more complex generation. This fifth generation is characterized by reflection and consolidation; unprecedented and conflicting conditions; fiscal constraint and demand for quality; and the demand that government, more correctly politics, be separated from higher education.

As noted by Deegan and Tillery, publicly supported community colleges gained tremendous support once the need for skilled technicians in both industry and the military was expressed during World War II. The gap between the knowledge base of high school graduates and college graduates at the time was far too great given the extreme demands of the war upon the nation. Responding to this revealed knowledge gap, President Harry S. Truman established a commission on higher education to study the reasons for the knowledge gap and report its findings with

appropriate recommendations for corrective action.

The President's Commission on Higher Education issued its report in 1947 calling for the development of community colleges. Specifically, the commission reported:

> *"The time has come to make education through the 14th grade available in the same way that high school is now available"* (p. 37, 1947).

Gradually, the seeds of thought contained in the Commission's report began to germinate nationally. In 1948, two-year community colleges enrolled 153,970 students. By 1968 their enrollment increased to 1,169,635 (Department of Health, Education and Welfare, 1970, p. 75), an increase of over one million students in twenty years. Today, in the United States, Community, Junior and Technical Colleges enroll 41% of all undergraduate credit students; 55% of all first time freshman credit students, and more than 50% of all minority students. (Division of Chemical Education, American Chemical Society 1990). As enrollments grew so too did the number of institutions. During the 1960's alone, the number of community colleges increased from 656 to 1,100 an almost sixty percent increase in one decade alone (Medsker and Tillery, 1971, pp. 16-17).

In Massachusetts the development of a community college system can be traced to the return of Foster Furcolo from Congress to the Commonwealth in 1952. Furcolo, served two

terms in Congress and was cognizant of national issues and the intimate connection between them and higher education.

Once back in the Commonwealth, Furcolo campaigned for the office of governor and in 1956 was elected to his first term in office. One of the first acts of the new governor was to recommend to the legislature the formation of a state commission on Audit of State Needs charged with determining the role of state government in the area's of mental health, public health, transportation and higher education. In 1957 the commission was established by the legislature, and in March of 1958 the Audit of State Needs issued a special report entitled, ***Needs In Massachusetts Higher Education With Special Reference to Community Colleges***. The report strongly recommended the creation of a state system of regional community colleges.

On July 8, 1958 legislation creating the Massachusetts Board of Regional Community Colleges was approved in the House of Representatives. On October 6, 1958 Governor Foster Furcolo signed into law Chapter 605 entitled: *"An Act Establishing A Massachusetts Board of Regional Community Colleges and Providing For The Establishment Of Regional Community Colleges"* (see Appendix 1).

According to John Costello (1990), then a working member of the Audit of State Needs Commission and later the Executive Vice President of the Massachusetts Board of Regional Community Colleges (M.B.R.C.C), Chapter 605 not

only created the community college system, but also mandated two unusual policy decisions. First, all community colleges were to be state funded and governed by the M.B.R.C.C. Therefore, from October 6, 1958 onward cities and towns could not initiate their own independent community or junior college. At the time there were three municipally run junior colleges in Massachusetts: One each in Quincy, Newton, and Holyoke. Ultimately, Holyoke Junior College became part of the state community college system. Newton Junior College went out of business. Quincy Junior College remains as the only city run junior college in the commonwealth.

The second accomplishment of Chapter 605 was, and still is, significant. It mandated that the state assume all costs of running the community colleges. Monies generated from student tuition would revert back to the state general fund, not the college or regional board. Historically, junior or community colleges in America were locally operated and governed under the jurisdiction of the local school committee. With the advent of community colleges most states adapted the so called *"one third rule"* for funding community colleges. The one third rule required the cost of funding the college be divided into three equal parts--one third each from the state government, the local government, and students.

Once the enabling legislation (Chapter 605) was signed into law, Governor Furcolo proposed to the legislature a capital outlay bond issue of twenty-four million dollars to support the construction of eight community colleges to be located in various regions throughout the commonwealth. The legislators did not support the governors multi-million dollar capital request, primarily because they felt there was insufficient documentation to support a request of such magnitude.

The legislature instead appropriated to the Massachusetts Board of Regional Community Colleges one million dollars to finance the required planning necessary to document, support and attempt to justify the ambitious and expensive building program requested by the governor.

To start a community college system with only a million dollars was problematic at best for the governor and the members of the Board of Regional Community Colleges. According to John Costello (1990), the general consensus was to get the process moving and start the first college. This required someone to shepherd the budget appropriation to operate the first community college through the executive and legislative branches of state government. The M.B.R.C.C. engaged the services of Thomas E. O'Connell, then Deputy Director of the Budget in New York State under Governor Averell Harriman, for this purpose. Thus, Mr. O'Connell became the first full-time professional employee

engaged by the Massachusetts Board of Regional Community Colleges.

Mr. O'Connell received a green light to start the Berkshire Community College in April of 1960 and opened the following September with 150 students. In the words of Thomas O'Connell (1968, p. 1):

> *"In September of 1960 I found myself running an educational bedlam. It was called a community college. It consisted of 150 students of college age and older assembled on the fourth floor of an old, once-deserted, school building in Pittsfield, Massachusetts; three full-time and several part-time faculty members; two secretaries and me."*

The experience of the *"pilot"* college became de facto policy for starting other community college sites in the state--for example, the acquisition of land upon which to construct a new campus. The city of Pittsfield donated an 180 acre site to the M.B.R.C.C. for the construction of a new Berkshire Community College campus. Following that precedent, any city or town that wished to host a community college was required to donate at least a 100 acre site to the M.B.R.C.C. This requirement was not a difficult problem in the western part of the state. However, in the eastern region, clear land was scarce, and a parcel that size often

meant the land was difficult to build on (ledge, swamp, peat moss, waste or dump site, etc.) or too valuable to give away.

Despite the aforementioned problems, the Massachusetts Community College system grew rapidly. In 1961, three more community colleges opened in temporary facilities donated to the M.B.R.C.C. They were: Massachusetts Bay Community College in Wellesley, Northern Essex Community College in Haverhill, and Cape Cod Community College in Barnstable. In 1962, Greenfield Community College opened, followed in 1963 by Quinsigamond Community College in Worcester. In 1964, Holyoke Junior College was incorporated into the state system and Mt. Wachusett Community College opened in Gardner. Between 1964 and 1968 four additional community colleges were opened--North Shore in Beverly in 1965, Massasoit Community College in 1966, Bristol in 1966, and Springfield Technical Community College in 1967. By 1968 the one *"quasi-college system"* of September 1960 had developed into a system of twelve genuine community colleges.

Establishment of North Shore Community College

According to John Costello, the M.B.R.C.C. had determined the need for a community college on the North Shore. The question was where to locate it. Both the

cities of Lynn and Beverly actively pursued placement of the college in their city. Beverly was selected as the site when it offered to rent the old abandoned Briscoe Junior High School in downtown Beverly to the state for one dollar per year. Further, at that time, the political strength of the Beverly area was substantial and included Senate president Kevin Harrington, Senator Saltonstall from Beverly, and Henry Cabot Lodge, also from Beverly.

North Shore Community College, the ninth college in the Massachusetts Community Collegeg system, opened its doors for the first time in an old, abandoned school building located at 3 Essex Street in downtown Beverly, Massachusetts on September 20, 1965. Following in the tradition established by Pittsfield Community College in 1960, the college opened in "*temporary*" and otherwise inadequate facilities (Shively, 1990). Given the history of other campuses in the system and the statements of political and educational leaders, faculty and staff had reasonable anticipation that a new campus would be built within the next five years.

The temporary home for North Shore consisted of two old inter-connected buildings, one built in 1874, the other in 1910. Because of their age and proposed temporary use, the Commonwealth of Massachusetts spent the relatively minor amount of $235,000 to clean up and renovate the buldings. This is a minimum amount considering that the buildings

contain approximately 65,000 net square feet.

Harold Shively, the first President of North Shore, arrived in February of 1965 to find a small office in the Hardie Elementary School in Beverly. From that office, he worked to prepare the Briscoe building to house the 26 professional staff members, three transfer programs, three occupational programs and 474 students recruited for the September, 1965 class. Along with opening the college, President Shively began planning for new campus facilities in Beverly. Initially, the process involved the identification and acquisition of approximately 100 acres of land in Beverly. In accordance with the Berkshire precedent, the land had to be donated by the city to the state for this purpose.

On May 5, 1967 *"The Summary Report of the Master Plan for Massachusetts Community Colleges Through 1975,"* prepared by Donald E. Deyo under legislative authorization as contained in Chapter 640, Acts of 1964, was submitted to Theodore Chase, then Chairman of the Massachusetts Board of Regional Community Colleges.

The report included a priority order for construction of permanent campuses for already operating colleges. In addition, it issued the following findings and recommendations regarding North Shore Community College:

> *"Although not established until the Fall of 1965, it is already evident that the size of the*

institution was seriously underestimated. Like those of the other colleges, the temporary plant is inadequate as to size and the specialized facilities necessary for a broadly comprehensive curriculum. In a very brief time North Shore's problems and shortcomings will be intolerable. Young as the institution is, a site should be identified and acquired as early as possible, architects appointed and planning money appropriated. The urgency of the North Shore problems is second only to Massachusetts Bay and it should be assigned priority two" (Deyo, p. 27).

In response to the Deyo document, President Shively prepared and submitted to the M.B.R.C.C. a campus need statement consisting of a single sheet of paper (see **Appendix 2**).

As enrollment grew in subsequent years, the need for additional classroom and support space intensified. To accommodate these needs, the college, unable to secure a permanent campus, entered into lease agreements for additional space as it became available in downtown locations in Beverly. By 1974, the College was holding classes in seven rental buildings there.

Since the college was spread out in the downtown area, student parking was a serious problem for local business owners, whose business depended upon the availability of convenient parking. Some business owners, upset over the parking problem, banded together to restrict the growth of the college in the downtown area while others worked to remove the college from the downtown area altogether. Often college officials attended city council meetings where they were subject to strongly worded statements of local business leaders, who vented their anger over the lack of progress in resolving the parking problem. The consensus of these meetings was that North Shore Community College would seek space outside of the downtown area and relocate as many students as possible in a less congested area (see Appendix 3).

In the Fall of 1974, Michael S. Dukakis became Governor of Massachusetts. Running on a platform of economy in state spending and no new taxes, Dukakis soon discovered that the state's financial condition was a great deal more serious than he had realized and, as a result, he ordered a reduction in state spending and reduced the appropriation for public higher education by approximately ten percent. According to John Costello (1990), who was then executive Vice President of the Massachusetts Board of Regional Community Colleges (M.B.R.C.C.), this action severely curtailed on-going facilities planning efforts at North

Shore Community College. Also at this time, Governor Dukakis directed that the focus of state planning shift toward the revitalization of the downtown area of older cities and towns. To this end, he vowed to review all state planning and construction projects to determine their potential impact on the economic growth and revitalization of the older cities and towns. This action by the governor helped fuel the ongoing and often heated debate between the city of Beverly and the city of Lynn over where best to locate the new campus for North Shore Community College (see **Appendix 4**). From the beginning of discussion concerning the possible location of a community college on the North Shore of Boston in the early sixties, local officials from both the cities of Beverly and Lynn lobbied the M.B.R.C.C. to promote their unique ability to host the proposed college. Even though the City of Beverly was initially selected as the host city for North Shore Community College in 1964, the temporary nature of the rental facilities left open the discussion of where best to site the permanent campus.

By 1978, due to continuing increases in enrollment, staff, and programming, rental space in Beverly included the original 3 Essex Street location; two old wood frame houses, the basement of a retail store, the top three floors of another downtown building and approximately 55,000 square feet of another professional building (Sohier Road) located

approximately one mile from the 3 Essex Street site.

Governor Dukakis, responding to repeated attempts to draw his office into the campus debate, on January 19, 1978 (see Appendix 5) sent a letter to Charles Hamilton, Chairman of the M.B.R.C.C. outlining his views regarding the new campus and its future location. The letter reflected the Governor's concern that a siting decision be made expeditiously as well as his desire to direct state support toward downtown revitalization. Dukakis wrote: *"A downtown location, if feasible, would satisfy my strong desire to see major state facilities located in such a fashion as to contribute to the revitalization of our older urban centers"* (Dukakis, p. 2). The Governor's *"strong desire"* was welcome news to the city fathers in the industrial city of Lynn but ran counter to the wishes of some of the merchants in downtown Beverly.

Finally, the M.B.R.C.C., frustrated over not reaching a solution to the problem of a permanent campus for North Shore Community College, engaged the consulting firm of Dober Associates, Inc. of Belmont, Massachusetts to undertake a comprehensive analysis of the College's service area with special emphasis on demographics, transportation and educational needs, and finally to recommend to the M.B.R.C.C. the best possible site for a new campus for North Shore Community College.

Upon completion of their research, Dober Associates, Inc. submitted their recommendations in the form of a report

titled, *"North Shore Community College Location Study,"* to the M.B.R.C.C. on October 16, 1978. Their recommendations included the following:

> *"Having reviewed the educational goals and objectives of the North Shore Community College, the demographic trends in the region it serves, the college's projected facility requirements, the physical characteristics of alternative sites thought to be available for a permanent campus, the probable capital costs for developing those sites, and the related questions of land assembly, project schedule, and the economic impact development could have on the local community--taking these and other factors into consideration--we recommend that in order to satisfy the educational requirements of the region a central campus be constructed in Beverly and concurrently a comprehensive campus center be developed in downtown Lynn"* (Dober, 1978, p. 2).

The report recognized the unique characteristics of the College's service area stretching from Cape Ann in the north to Saugus and Revere in the south and from the ocean in the east to Middleton in the west. Also mentioned in the Dober Report was the fact that the City of Lynn, the largest city

in the aforementioned service area, was the single greatest contributor to the College's overall enrollment.

The recommendations of the Dober Report were not radically different from some of the then current budgetary and facilities planning efforts underway at the college itself. Specifically, the college administration requested $500,000 to open a new educational "*training center*" in downtown Lynn in its FY79 operational budget. The college administration understood the politics of the state budget system and the influence both the Speaker of the House of Representatives, Thomas W. McGee of Lynn, and the Senate majority whip, Walter J. Boverini of Lynn, had on the budget process. The college plan offered the opportunity to increase the operational budget of the college while attempting to improve the skills of students through remediation. The concept was to provide a one year educational program designed to improve the basic skills of the student population in Lynn leading to subsequent enrollment in the two year program of N.S.C.C. in Beverly. Thus, in early 1978 North Shore Community College was planning two new campuses, one in Beverly and one in Lynn. The Lynn campus held the greatest promise for immediate funding given the realities of the political strength in the city of Lynn as mentioned earlier.

Facilities Planning and Construction-Political Environment

The planning process for the Beverly and Lynn campuses were being conducted at a time when state construction was undergoing scrutiny. The scrutiny was prompted by the often shoddy and incomplete methods used to design and build state buidlings, including college facilities. During the early years of the Massachusetts community college system, the process of educational facilities planning frequently required only a statement of need from the executive administrator in charge. Often the statement of need consisted of simply one sheet of paper (see Appendix 2) requesting a library or a gym or even a comprehensive community college complete with parking lots and playing fields. This process suggests that consultants, architects, and the contractors basically acknowledged the presence of educators, but did not request their insight and direction. It wasn't long, however, before the inability of the recently constructed buildings to service the educational program needs became apparent. Specifically, on the campus of Boston State College, in downtown Boston, a new tower building was constructed that contained classroom and support space as well as a large auditorium/theater. The theater balcony was designed and constructed in such a way that the front restraining wall of the balcony prohibited anyone seated in the first few rows of the balcony from seeing the stage. At the University of Massachusetts in

Amherst a new ten million dollar heating system was installed to replace the aging coal fired system. Due to design errors and faulty construction the new heating system has never been used. On the campus of the University of Lowell, a nuclear reactor was designed and constructed for scientific research. Due to design and construction problems it sits dormant. These are only a few of the examples cited by the Ward Commission (resolves of 1978 Chapter 5, vida infra) in their investigation of state construction projects. These examples illustrate that the planning process used in the construction of many state colleges and universities resulted in facilities where the form and function were completely incongruent with the needs. The result of this process was troubling for the students, the faculty, the staff, the administrators, and the taxpayers, who were once again having to pay the ever increasing bill.

> *"The miserable record of public construction in the Commonwealth of Massachusetts is a measure of contempt for the public realm and a failure to remember the root meaning of the "Commonwealth," the shared common life of all citizens of the state which should be ruled by the highest standards, and symbolized, especially in its architecture, by excellence."* (Massachusetts Continuing Legal Education, New England Law Institute, Inc., 1981, p. 9).

As a result of this lack of concern for the public well-being, Governor Dukakis on April 12, 1978, signed into law Chapter 5 of the resolves of 1978, creating a special commission to investigate allegations of corruption in the award of state and county building contracts, and to make recommendations for legislative and administrative reform. This special commission was chaired by Dr. John W. Ward, the president of Amherst College, and subsequently it was generally referred to as the Ward Commission.

The Ward Commission conducted a study of recently constructed public buildings in Massachusetts and submitted a lengthy and well documented report. Statistics from the special commission report tell the story:

> *"Since January 1, 1968, the Commonwealth through its several agencies appropriated more than seventeen billion dollars, including debt services, for construction projects, an enormous sum which does not include money spent by cities and towns. In the sample of buildings which were examined, seventy-six percent have significant defects, that is a structural flaw that threatens the safety of the building and results from incompetent design or inferior construction. Major construction projects under the supervision of the Bureau of Building Construction show a failure rate of 72%, that is*

have areas which are unusable because of errors in design. Since 1968, over a billion dollars has been wasted because of unnecessary delays in design and construction, and fifty million dollars has been spent on plans and designs for buildings which were never built. The estimated cost to the Commonwealth to repair present defects in all public buildings is more than two billion dollars." (Massachusetts Continuing Legal Education-New England Law Institute Inc. MCLE-NELI, Inc., 1981, pp. 9-10).

As the result of the findings and recommendations of the Ward Commission, the Omnibus Construction Reform Act, Chapter 579 of the Acts of 1980 became law.

Within the political climate that followed the passage of the Omnibus Construction Reform Act (Chapter 579 of the Commonwealth of Massachusetts) North Shore Community College began to plan new campuses in both Beverly and Lynn, Massachusetts.

CHAPTER THREE

EDUCATIONAL PLANNING/EDUCATIONAL SPECIFICATIONS

In order to coordinate and direct both the Beverly and Lynn facilities planning efforts, I was hired on August 8, 1978 as Director of Facilities Planning, reporting to the college president. Initially, I was to assist Dober Associates with their location study and coordinate the effort necessary to ensure the proposed training center in Lynn was completed and operational within the fiscal year 1979 budget cycle.

Prior to my arrival at North Shore, I taught mathematics at a local high school and worked a second job in the construction industry, supervising the construction of residential, commercial, and industrial buildings.

Upon my arrival at the college, I learned that only a single document existed which supported the proposed *"academic expansion"* in downtown Lynn. This document, titled *"Lynn Center, Academic Design,"* was jointly prepared and submitted by the director of the learning resource center (library) and the chairperson of the English department. The proposal stressed the cultural diversity of the population in the city of Lynn and called for: *"A one-year educational program fully integrating post secondary educational experiences and addressing the academic, personal, and career needs of the community"* (p. 2).

Due in part to the limited amount of available information at the time, it was obvious to everyone that time and reason would not permit a September, 1978 opening in Lynn. Therefore, a planning schedule was prepared that targeted a January, 1979 opening date. This coincided with the beginning of the usual second semester at the college.

The most immediate and widespread problem was the mindset of most of the faculty and administration pertaining to educational facilities planning. The faculty and administration were frayed by continual facilities planning for over a decade. After thirteen years of continual new campus planning but no construction along with ongoing rentals, renovation, and moving into new spaces, the faculty and staff grew intolerant and disillusioned regarding facilities planning. For these reasons, a sense of apathy toward the subject of new campus planing gripped the vast majority of faculty and staff of the college. The words of one faculty member reflected the prevailing interest on the subject when in 1979 Ben Merry stated, *"What is today's truth? Are we planning for a new campus to be located God knows where or are we planning to rent a building in Peabody, Danvers, Gloucester, Beverly or possibly out on Misery Island" (Merry, 1991)?* Faculty often responded to my planning inquiries by stating: *"Just give me the space, I can teach anywhere."* On the other hand, many within the college were demanding new facilities. When questioned for

particulars, however, their response was often: *"It's not my job" or "I know what I want but numbers and architectural drawings scare the hell out of me."* By the time of my arrival at North Shore, the enthusiasm and anticipation of the faculty and staff during the late 1960's and early 1970's had waned. According to Ben Merry (1991), dirctor of the Industrial Technologies department, *"We have been giving input and requests for new facilities since 1965 with nothing to show but paper and memos. It's difficult to see why we should continue to update our requests when there is no hope of building."*

Soon after my arrival at North Shore, I met and began to work with the then assistant dean of academic affairs, Dr. David L. Adams. I soon discovered that he was the informal power source in the dean's office. Once acquainted, Dr. Adams listened intently to my planning concerns and challenged my thinking at every opportunity. He voluntarily made himself available to coordinate and represent the academic component of the facilities planning effort, and from the very first meeting challenged and debated every facet of the planning effort as it pertained to academics. Dr. Adams accepted complete responsibility for the academic component and produced clear and concise documentation--to defend the academic program needs at all times.

In 1991 Dr. Adams, then an Associate Professor of Chemistry at Babson College, recalled this time:

> *"The prevailing attitude regarding facilities planning at N.S.C.C. was 'show me.' This feeling was generated from many years of facilities planning. Faculty and the Dean's office were reluctant to commit further time and resources to what they saw as a thankless task. Being newly appointed as assistant dean, I viewed the task of facilities planning as a great learning opportunity, and, with the agreement of the Dean, requested and was given complete responsibility for the academic planning effort. I believe that the Dean was willing to delegate these responsibilities because he never believed that anything would result from it."*

Further complicating the facilities planning process was the fact that the scope of the Lynn campus requested by the college in its 1979 operational budget was superseded by M.B.R.C.C. action (see Appendix 6) on October 31, 1978. The Board voted to accept the report of its Facilities and Sites Committee which included the recommendations of the Dober report to locate a campus center for 1,000 Full time equivalent (FTE) students and 500 cars in Lynn. This Board

action was never fully explained to college personnel and helped feed the rumor mill of misinformation (i.e., the total college is moving to Lynn), and that tended to polarize the college community along Beverly vs. Lynn lines.

Education Planning - Internal and External Component

Both Dr. Adams and I believed that the facilities planning process the college was undertaking must be built in accordance with the mission and goals of the college. We further strongly believed that the entire college community should be involved in the total process. The planning process that emerged in the Fall of 1978 had two major components. The first involved those activities internal to the college, the second involved those activities outside or external to the college involving politicians, architects, and business people.

The internal component involved the four main college units: academic affairs, student affairs, continuing education, and central administration. While Dr. Adams had full authority to handle academic affairs as described above, none of the other components established leadership involvement in planning similar to his. The other three components did not feel that anything would result from the planning process and thus, did not stress the importance of this task. By default, then, I handled the internal component for the other three units. These internal

components included: central administration (President's office, computer center, business office, maintenance, personnel, security, bookstore); student services (registrar, admissions, financial aid) and continuing education. These efforts were largely based on the overall college enrollment projections as determined by the academic component.

The second, or external component of the planning effort was also directed by me, and it involved the tasks of land acquisition, budget development, coalition building, briefing political leaders, and understanding community concerns. This component had many complex elements requiring careful consideration of the concerns of others. It was essential to pay constant attention to their perspective on issues and decisions requiring their support if the planning effort was to continue to move forward. This often required the momentary subordination of one's own perspective on the project to that of another who at the time might be more interested in self-advancement and not necessarily project advancement. Among those interested in self-advancement were elected officials, speaking with little or no knowledge of the project, who would make statements that required later clarification but at the time were allowed to go unchallenged. To do otherwise would alienate the elected official and possibly reduce the much needed

support base a project of this magnitude required. For example, the site for the Lynn campus was acquired by an Order of Taking dated August 21, 1981. The twenty-nine parcels of land that collectively composed the campus site were taken by eminent domain pursuant to the applicable provisions of Massachusetts general laws. The taking authority was the Commonwealth of Massachusetts for the sole purpose of constructing a new campus facility for North Shore Community College on the site. On November 28, 1981 a major fire broke out in an old manufacturing complex adjacent to the newly acquired college site. The manufacturing complex was owned and operated by the quasi-public Economic Development and Industrial Corporation (E.D.I.C.) of Lynn and was undergoing major renovation and development at the time of the fire. The project was funded by an Urban Development Action Grant (U.D.A.G.) and was a total loss as a result of the fire.

Not long after the fire, City of Lynn officials approached me with a proposal to swap the fire site for the state owned college site. I informed the city officials of the fact that the college was not interested in any land swap and further, expressed my belief that land taken by eminent domain was taken for an explicit purpose and could not be used for any other purpose (see Appendix 7).

Within two weeks of my meeting with the city officials, it was reported on the front page of the local newspaper--

the ***Lynn Item***--that Senate majority Leader Walter Boverini of Lynn was coordinating the effort to swap the state owned college site to the city of Lynn in exchange for the fire ravaged site owned by E.D.I.C. According to the article the intent of the land swap was to move the college further away from the waterfront and allow the construction of three major condominium complexes closer to the waterfront.

Shortly thereafter, the State Attorney General's Office notified the college that three of the owners of property taken on August 21, 1981 were seeking injunctive relief from the Order of Taking. The case was heard on May 10, 1982 in Peabody Superior Court. In court the attorney for one of the land owners contended and placed on the record that the college was part of a scam and that everyone, including the Senate Majority Leader Walter Boverini and college officials, were taking his client's property to be exchanged for adjacent property, thus benefiting a third party. The attorney supported his allegation with newspaper articles taken from the ***Lynn Item***. The result was the court ordered a 90-day delay in evicting the three owners (see Appendix 8). Communicating the complexity of the project and the associated restrictions of law to strong-minded elected officials required an awareness of their political power if we wished to maintain their project support. On campus planning leaders affectionately referred to this element of the planning process as *"Damage Control."*

The extensive amount of time and effort employed addressing external concerns was in part necessitated by the ongoing Ward Commission investigation into public construction projects. Further, educational institutions, especially comprehensive community colleges, ran the danger of being shaped more by outside forces than internal ones. Finally, the reality of the public arena dictate that academic facilities planning, no matter how well researched, debated, defined and documented internally, must eventually receive external understanding and support. Without both political and financial underpinnings, the total project would have been reduced to simply planning for planning's sake which is meaningless.

The importance of an informed external environment and strong coalition building was clearly demonstrated when Governor Dukakis was defeated in his bid for reelection in 1978 by Edward J. King. Governor King, aware of the extensive problems being exposed in state construction, immediately upon taking office ordered a moratorium on all new state construction projects until new corrective legislation could be drafted and voted into law. The delegation of North Shore legislators collectively met with the new governor and were successful in convincing him of the importance of the project and the need for it to press on. This same group of legislators successfully defended the capital budget request for the Lynn Campus project

totaling $25,000,000 in the Ways and Means Committee and later on the floor of both the House and the Senate. The important point here is that they were successful, because they were well informed and were able to convince their peers of the project's merit while countering the arguments of strong opposition. Similarly, all planning documents and requests relative to the Lynn Campus project, whether requiring approval or not, were hand carried by me through the appropriate state agencies to ensure timely approval and answer any questions that may arise.

Fundamental Planning Documents and Philosophy

During the facilities planning effort, we learned that academic facilities planning rests upon several key institutional planning documents. These include:

1. **a clear, concise and approved college mission statement**
2. **stated and approved curriculum goals**
3. **present and projected curriculum program offerings**
4. **annual enrollment projections; overall and by program**
5. **listings of the number of faculty and staff required to operationalize the approved curricular goals.**

We also learned that facilities planning involves generating a process and philosophy for developing and handling data

and documents as listed above. Our planning philosophy was founded on the fundamental belief that the users of the planned facility best understood the academic functions to be performed therein. Thus, the user's insights, direction and thoughts were essential if we wished to ensure, to the maximum extent possible, that the facility supported the desired educational activities. This planning philosophy was operationalized during informational and planning meetings, or daily by our example. The philosophy had five guiding points that over time threaded their way into every facet of the educational planning process. These five points were:

1. **Acknowledge that users must inform the planning process.**
2. **Maintain a logical flow to the planning process.**
3. **Encourage the participation of the entire college community.**
4. **Generate, to the maximum extent possible, agreement by consensus.**
5. **Establish and maintain a constant and consistent mode of communication.**

The following paragraphs elaborate these points further:

1. The planning and design of the facility should in large part be specified by the users. The ultimate usefulness of the building will be determined by those who use it. Therefore, it is sensible to solicit the needs and

comments of these people throughout the entire process. We prompted the users to think critically about what they do in the performance of their job function and what implications this had for facilities design. For example, in considering the design of the science and technology storage and preparation areas, the science and industrial technology faculty were questioned as to what kind of materials they received, their storage requirements, where the materials are used and how they are disposed to students. As a result of these questions and the ensuing discussions, the building design minimized the movement of materials while at the same time maximized their availability. Thus, we worked to ensure that the users informed the process to the maximum extent possible.

2. There should exist a logical flow in the progression of thought that drives the facilities planning process. Each step in the process should be founded upon and flow from prior steps. Quantitative classroom data should be based on annual, current and projected program enrollment data. That data, in turn, should be based on the curricular goals which in turn, should be based on the college mission statement. Thus, every facet of the planning process should be traceable back to the mission statement.
3. Every facet of the planning process should encourage and support, to the maximum extent possible, the

participation of the total college community. For example, in the academic component Dr. Adams sought information on academic programs, classroom needs, and special purpose classrooms among others, from all division and department chairs. When any of the submitted information was altered or adjusted by design considerations, the revised information was resubmitted to these same people for their review and comments. This process continued until all parties involved in the planning process arrived at a consensus. One example of the process was the design of the learning resource center or library. John Gaboury (1990), the then director of the LRC stated:

> *"I met with Dave Adams almost daily for a year. We reviewed many sets of plans from the architect upon which I would make comments and recommendations. The architects, using these recommendations, would draft a new set of plans. In the end I agreed to all the design elements of the Lynn campus library. My continued involvement depended heavily on my seeing that my work and comments were listened to and incorporated, to the extent possible, in the on-going development of the campus plans."*

4. We wanted to generate, to the maximum extent possible, agreement by consensus for all the phases of the process. Our desire was to involve and inform everyone:

faculty, division chairs, staff, and administration. We also sought to absorb their concerns and secure their approval. To this end, every iteration of the educational planning documents were reviewed and commented upon by as many members of the faculty and staff as possible. Moreover, all final documents were reviewed, discussed, and approved by the college community prior to external distribution (at the local and state level).

5. A timely and consistent mode of communications should exist throughout the planning, design, and construction process. Communications were carried out in several ways, one was to establish a consistent two-way channel of information flow that was both bottom up and top down. For instance, information emanating from and going to the academic component went through Dr. Adams. This ensured that all academic users received consistent treatment, and that all inputs were consistent with the academic planning documents. Another way the goal of consistent communications was implemented was to develop, as appropriate, forms designed to gather information so that all input would be received on the same form.

As the director of facilities planning, coordinating the Lynn campus effort, I was both a user and educator. As an educator, I had a key role in ensuring that the needs of

other educators were represented in the planning process. I viewed my role as being a member of a team of educators all working toward representing the needs of all users, especially the faculty, in the facility design. Throughout this entire process, my work represented a delicate melding of the specific communicated user needs and other requirements and constraints presented by the non-users.

Further, as project director, I assumed the additional responsibility of checking all requests with the appropriate functional leader in each of the major areas of the college to ensure that the requests were reviewed and approved prior to submittal in my office. Concurrently, all planning documents developed in my office were first prepared in draft form, then sent to the respective areas within the college for review, comments, and approval. The two-way flow of information through proper channels coupled with the development and use of standard forms helped to involve and inform the college community at all levels.

Rationale and Development of the Master Planning Document - The Educational Specifications

The planning philosophy we employed served to engage the college community in the facilities planning process while demanding constant receptivity and information transfer from the facilities planners. Inherent in our philosophy of logical flow and active participation was the

requirement and responsibility on the part of the institutional planning leaders (Dr. Adams and I) to communicate as clearly and concisely as possible the elements that collectively defined the academic foundation upon which the facilities planning effort rested. When we started to plan for the permanent Lynn Campus, logic dictated we gather all the educational planning documents and data in one place. A master planning document would contain such things as the mission, enrollment projections, projected curricular offerings, number of classrooms required, their size, the number of faculty, the number of staff, the proper amount of support space and all the details that linked these various components. We hoped that a well organized comprehensive master planning document that chronicled and detailed the essential planning elements that collectively defined the college would inform the participants, as well as the designers, and resolve any issues of concern that surfaced as we moved forward toward our ultimate goal.

We initiated the development of the master planning document by reviewing the potential strengths and possible weaknesses of the current college mission statement. We believed the mission statement to be the foundation or base document upon which the college rested. Thus, we began the planning process by examining the future validity of the existing mission statement in light of the new planning

objectives. Fortuitously, approximately a year earlier the college mission statement had been reviewed by the faculty, and approved by the Board of Trustees. With the base document of the planning process--the mission statement--firmly in place, we looked toward other institutional data that flowed directly from the mission statement. These included: (a) the projected annual enrollment for ten years, and, (b) the present and projected academic program (degree) offerings for six years. At this stage in the planning, both Beverly and Lynn were involved. The Dober report, as accepted by the M.B.R.C.C, placed the central campus in Beverly and the branch campus in Lynn. Further, logic dictated that enrollment and academic program planning for both campuses be done simultaneously. The projected ten-year annual enrollment figures were developed by the college office of planning and research. It was necessary that these figures be consistent with the recommended enrollment figure for Lynn of 1,000 FTE as contained in the Dober Report and, subsequently, approved by the M.B.R.C.C.

At the time, the curriculum committee had been working on the review and development of program offerings at the college. As curriculum committee chair, Dr. Adams was able to prepare a draft list of current and projected academic program offerings for both the Beverly and Lynn campus for ten years into the future. Planning meetings with academic leaders were scheduled to discuss in-depth the significance

of the academic programs, and Dr. Adams invited open discussion on each program listed.

According to Thomas Wisby (1990), Chair of the Human Services Division at N.S.C.C.:

> *"The internal academic facilities planning process in the academic affairs component began when Dr. Adams brought the academic leaders together. They were presented with an opportunity to inform and influence the planning process that would lead to new academic programs and work space."* He further noted that: *"Dr. Adams constantly stressed that the rationale for space design and construction rested with academic programs and the kind of instruction faculty wanted to employ."*

After numerous meetings with faculty, division chairs and department heads, a draft master list of academic programs was prepared. This list included all the programs then offered at North Shore, all the proposed programs to be offered--in whole or in part--in Beverly for the ensuing six years, and all the programs to be offered--in whole or in part--in Lynn over the next six years. This draft master list, along with a cover memo requesting careful review and comment, was sent to all academic planning leaders (see Appendix 9). Once the programs were agreed upon, the

enrollments for these programs at both the Beverly and Lynn campuses had to be determined. A draft of the annual program enrollment by campus document was analyzed and annotated by all academic and planning leaders. Dr. Adams reviewed the comments, met with the appropriate academic leaders to discuss their concerns, made any necessary changes and repeated the process by sending a new draft to all academic leaders. This process continued until consensus was reached on the annual program enrollment by campus document. According to Dr. Adams:

> *"I met with the division chairs at least six times to review new versions of the annual program enrollment. Each time the division chairs would solicit input from their faculty and return a revised version. This process continued until all the division chairs were satisfied with the plan."*

Simultaneously, I was working closely with the Lynn educational and business community to gain insight into their academic concerns. Once an academic need was identified (e.g., English as Second Language (E.S.L.)) this information was forwarded to Dr. Adams for consideration and as a possible program to be included in his list of program offerings. Due in part to input such as this, several iterations of the draft document were required before the

annual program enrollment was concluded.

Until this point, planning activities for both the Beverly and Lynn campuses had been joined. From this point on, planning for the Lynn campus took place on a parallel track, but independent of the Beverly campus.

The next step in defining the Lynn campus of North Shore Community College was to convert the annual program enrollment data for the Lynn campus into the number of classrooms, laboratories, offices, support spaces, and the number of faculty and support staff required to teach and administer the proposed programs. Following this, the size of these spaces had to be determined. Thus, each classroom and support space was carefully analyzed to determine the appropriate square feet required, given the number of occupants to be assigned. To accomplish this conversion of academic program enrollment data into rooms and spaces, and subsequently, into assignable square feet we relied heavily upon the methods detailed in the ***Higher Education Facilities Planning and Management Manuals*** developed by the Planning and Management System Division Western Interstate Commission for Higher Education (W.I.C.H.E.) (May, 1971). Other support documents included the ***Facilities Planning Guide for the Community College System*** prepared by the Massachusetts Advisory Council on Education, specific Summary Reports from the National Center for Education Statistics such as ***The Impact of Section 504 of the Rehabilitation Act of 1973 on***

American Colleges and Universities, (May, 1979), *Rules and Regulations of the Architectural Barriers Board* prepared by the Department of Public Safety Commonwealth of Massachusetts (March 3, 1977), the Commonwealth of Massachusetts Building Code and any faculty-to-student ratio requirements that might influence the assignable square feet necessary to house and support the academic programs we wished to offer in Lynn.

The conversion from annual academic program enrollment to academic classroom and support spaces and then assignable square feet data was accomplished by Professor Ronald Tagney who reported to Dr Adams. Tagney, once assistant to the president at North Shore, was a professor of history at the college and well respected by his peers. Professor Tagney once developed a set of educational specifications for the college when he was assistant to the president in 1970. He possessed broad knowledge of the college from an institutional perspective rather than the often encountered departmental or personal perspective. Because Tagney was respected at all levels of the college, he brought to the planning effort the added ability to bridge the credibility gap that existed between faculty and administration. At this point Tagney commented (1989):

> *"Because I was once the assistant to the President of the college, I was able to communicate effectively to both faculty and*

administration. My role was to attempt to get both sides, faculty and staff, to correctly and completely understand the viewpoints of the other."

Because he was a faculty member of unquestioned integrity and known for his quality work, Tagney could talk with faculty members, draw out their concerns and bring them into the planning process. Dr. Adams recognized these qualities and potential in Professor Tagney and negotiated with him a reduced teaching schedule to be replaced with planning assignments (see Appendix 10).

At this point it is important to note the characteristics of both Dr. Adams and Ron Tagney that permitted them to overcome faculty reluctance to become immersed in the planning process. Both were respected faculty members (Adams recently promoted to associate dean), known for their seriousness and unwillingness to spend time on a project that would not yield results. Adams' and Tagney's involvement and leadership in this project signaled to other faculty that this project was not just another waste of time, but had potential. Not all faculty took this view, but enough did to give the planning wide spread consensus. On this point, Bennet Merry, head of the Industrial Technologies Department, said: *"Dave Adams was the only guy that listened to what I had to say, understood it, and then most surprisingly of all, included my needs as I described*

them, in the planning process." This quote illustrates what happened as the planning process evolved. The faculty saw results, they saw their input and needs included in the planning documents produced. This combination of characteristics including seriousness, willingness to work with and understand faculty needs, reputation for working on positive projects and follow-through allowed Adams and Tagney to turn the faculty around from non-planners to active planners.

Professor Tagney and Dr. Adams together worked with the faculty to develop the calculations necessary to convert the annual academic program enrollment data into the required number of classrooms and support spaces. For example, all of the programs offered at North Shore Community College required students to take English classes. Therefore, the following analysis and calculations were performed to determine the number of classrooms required in Lynn to accommodate students taking English.

With an enrollment of 1,000 FTE students and all students taking a least one English class (English was required for all programs of study) this amounted to 573 students (all first year students and those second year students in liberal arts programs) in any given semester taking English. These 573 students had three hours of English classes per week. This yields 1,720 weekly student contact hours (W.S.C.H.).

The number of weekly student contact hours was subsequently divided by the appropriate factor for student station use as defined and specified on page 10 of ***The Facilities Planning Guide for the Community College System*** (October, 1969).

The student-station use factors are based on a 45-hour week and represent accepted national norms.

Classroom-Lecture

Hours per week space is to be used	34
% of student station occupancy	66%
Factor for student-station use:	34 x .66 = 22.4

Laboratory-Shop

Hours per week space is to be used	25
% of student station occupancy	87%
Factor for student-station use:	25 x .85 = 21.3

Sample Calculation of Teaching Stations (T.S.)

Thus, for English there were 1,720 WSCH for the Lynn center English classes. Using the student-station use factor that was derived from the MACE documents for English classes, the teaching station calculation was as follows:

$$\frac{\text{W.S.C.H.}}{\text{Teacher Station Student Station use factor x class size}} = \frac{1{,}720}{22.4 \times 30} = 2.56 \text{ Computed (T.S.)}$$

This computed number of teacher stations was adjusted in the educational specification document to three teacher stations to adequately accommodate students taking English classes. Similar calculations were made for all classrooms at the college.

The next task was to determine the methods for converting the number of student stations in a classroom to the room size in square feet required to properly accommodate the academic concerns of the program. Every possible space in the proposed campus needed to be identified and the number of square feet appropriate for that space assigned.

To determine the assignable square feet required for each academic space, the space allocation guidelines outlined in the ***Facilities Planning Guide*** prepared by the Massachusetts Advisory Council on Education (MACE) were initially followed. After careful review of the MACE guide, we found that the space allocation factors indicated for classrooms were too small, given recent changes in the state building code and the requirements of the federal handicap access law. For example, a classroom for 30 students had a space allocation factor of 16 square feet per student which translates into a 480 square foot classroom. A classroom of 480 square feet did not legally accommodate thirty students. Therefore, Dr. Adams and I began to investigate and compile all of the requirements that directly influenced the

eventual size of a classroom.

Once the assignable square footage for all spaces within the building was determined, the planning team employed the MACE area conversion ratio of 65% (ASF) to 35% (GSC) to convert the assignable square feet (ASF) to outside gross square feet (OGSF) (see Appendix 11 for glossary of physical space terms). Thus, the approximate size of the new facility was determined.

Once the building size was determined I needed to determine the minimum acreage necessary to support the desired academic facility. I began the process by focusing on the needs of parking to determine the appropriate land area necessary to support the college parking needs. I then approximated the first floor area in square feet (foot print) of the new facility based upon the assumption that the new facility would not exceed three stories in height. To determine parking needs I contacted many of my peers in other community colleges to draw upon their knowledge and experience relative to student parking needs and researched numerous architectural and community college planning documents such as ***Architectural Graphic Standards***, The American Institute of Architects, Ramsey and Sleeper, New York (1970), and ***Guide for Planning Community College Facilities***, prepared by the Division of Field Studies and Research Graduate School of Education, Rutgers--The State University, New Brunswick, NJ (1964), ***Manual for Planning***

and ***Construction of School Buildings 1975***, State Department of Education, Concord, NH (July 16, 1975), and ***Modifying the Existing Campus Building for Accessibility: Construction Guidelines and Specifications***, The Association of Physical Plant Administrators of Universities and Colleges (1981).

Eventually, I was able to establish an approximate percentage (25% to 30%) of the total population attending or working in the new campus that would arrive at the site by automobile, and require a parking space. This percentage, when converted, established the need for 400 parking spaces on the site of the new campus in Lynn. I then began to research engineering and technical reference manuals to determine the square foot requirements of a 400 car parking lot. The answer to my question was found in a National Crushed Stone Association publication titled, ***Design Guide for Permanent Parking Areas***, Washington, D.C., July 1970. The suggested planning figure was 350 square feet per car which included the total space requirements for lanes, turns, and stalls. By simply multiplying the number of cars (400) by the recommended factor of 350, I was able to determine the total square feet required to construct the desired parking lot. This figure of 140,000 square feet was then added to the 65,000 square feet determined to approximate the building *"foot print,"* the sum of these two figures represented the absolute minimum lot size needed to construct the planned facility. For me, this figure became

one more piece of vital information I needed to reference as I went forward with the process of developing a capital budget for the project and identifying an appropriate site for the new campus.

At this point, the Lynn campus was defined by a list of spaces and their assignable square footage. We also had a total outside gross square footage for the building which allowed budgeting and other outside considerations to proceed. We realized at this point that each space that was projected for the Lynn campus needed to be detailed and defined with regard to building location, services, special built-in furniture and equipment, and other special considerations to maximize its effectivness. Also, state and federal law regarding public safety, health and environment issues impacted the details of many spaces within the campus. Once again, it became apparent that those details which defined each space within the facility had to be gathered from the users, then coordinated, and eventually included in the educational specifications document.

The initial process we chose to deal with this problem consisted of developing a set of planning information sheets that were designed to collect the adjacency, plumbing, heating, electrical, fixed furniture, lighting, air conditioning, floor covering, computer, telephone, egress, and window requirements of each space (see Appendix 12). In

seeking to receive a completed set of these documents for each of the five major units of the college, we held informational meetings (see Appendix 13). During these meetings we instructed the participants on the type of information we were looking for, and how to complete the information sheets, and how to address additional concerns to improve the ultimate design of the facility. Having worked most of my life in the educational and construction field I was aware of the need to focus on every possible detail of the new facility and give as clear a picture as possible to the designers of what we as educators desired in our future work space.

I constantly stressed that we must be proactive in terms of the design of our work space and explained that if we did not take the initiative to think through and detail our needs, someone else would do it for us. Designers love to design from their perspective, and from experience I knew that this trait often leads to expensive change orders during construction, or worse yet, spaces that do not support the function for which they were designed. We have all seen new buildings with surface mounted electrical outlets, exposed water pipes, extension cords and wires running along walls and across floors, poor circulation patterns forcing occupants to waste valuable time waiting for undersized or poorly designed elevators, classroom, faculty, and administrative officers with no windows or

natural light and disgruntled students searching the campus for the non-existent quiet group study space to gather and work together. Part of my role in the planning process was to constantly remind everyone that they must think of what they do during their lectures every day, what they use in the process, where best to locate whatever it is they need and think carefully to determine if what they use requires a "*feed*" such as a water line, electrical outlet, gas jet, etc., and/or a "*return*" such as a water drain or chemical waste line. As simple as this may seem, one needs only think of the built-in requirements of a typing classroom, computer classroom, biology and chemistry lab, to understand that teaching is either supported or restricted by the academic space within which it is performed.

Faculty and staff responded to the request for additional information and began to gather the latest information on furniture and equipment. Discussion ensued on such topics as safety, security, classroom flexibility and teaching philosophy. In time, faculty and staff were discussing such topics as the proper location for dousing showers and eye wash units. On occasion, the amount of detail being presented exceeded the capacity of the planning work sheets so faculty and staff augmented their submissions with schematic drawings to illustrate their desires. The faculty and staff also possessed a wealth of vital information pertaining to the academic environment (i.e.,

classrooms, laboratories, office space and adjacencies, media requirements, fixed furniture and equipment, delivery of mail, faculty lounge and dining area) as well as the function performed within the individual environments. To acquire this information and insight, we constantly involved the college community in the planning process and in so doing, gained the knowledge and functional understanding of the work space they often assumed was common sense or trivial. The task was to stimulate faculty and staff thinking; we wanted the faculty to project their thoughts and vision into the future and ask--what will I need to properly teach my classes?

Often the answer to this question gave rise to site visits to other colleges or conferences with media and computer experts. In time, the faculty helped define the academic function performed within the classrooms, and together we worked to understand and delineate the appropriate academic environment given the information gathered.

Recently I interviewed Thomas Wisby (1990), division chairperson of the human services division at N.S.C.C., who reported:

> *"Dr. Adams established a real emphasis on planning by presenting documents, forms, time lines, and the appropriate line of communication to be followed should anyone have questions. He*

(Dr. Adams) would review all submitted documents, and, upon completion, sit with the appropriate division chairperson or department head to discuss questions that surfaced during his review and together they would work to resolve issues or clarify points of ambiguity."

Mr. Wisby further stated: *"I had to defend my discipline, Dr. Adams made me think, this was excellent for I learned a great deal about my own area."*

The process, as informative and challenging as it was, was not without problems. Many faculty and staff members had difficulty understanding or visualizing space in terms of numbers. Academic classrooms or faculty offices defined in terms of square feet often failed to capture the visual image of spaces within which they work. To help resolve this problem Dr. Adams explained the spatial dimensions in question and referenced existing space within the college that was approximately the same size.

This same process of participatory planning yielded the programmatic and space needs of the learning resource center, the cafeteria, the bookstore, faculty offices, and all administrative and support spaces.

When Dr. Adams and I began the facilities planning process, the focus of our attention was on people and programs, not bricks and mortar. We found that the active

participation of the college community in the planning process tended to expand their, as well as our, knowledge base of the college beyond the limits of our own discipline to the broader institutional perspective. Working together we--the future educators who would be using the building--spent the time necessary to learn and understand the many facets that collectively defined our college. We found that educators know the academic function a classroom should support, therefore, their thinking must be included in the planning process and constantly challenged. To this end, Dr. Adams directed the development of the *"educational specifications"* document, he reviewed every submittal, questioned everyone involved, when necessary he returned the documents to the academic leaders with comments. He continued this process until he felt comfortable that someone with little or no knowledge of North Shore Community College could pick up the document and quickly gain the knowledge necessary to understand the college philosophy, its academic programs and facilities requirements. For example, in order to fully explain the view of the college regarding faculty offices, the educational specifications document included a statement concerning its philosophy of how the offices should be located in the building. The contents of the statement evolved from the college mission and curricular goals and led diretly to the specific faculty office space listings. Specifically, one of the college's

goals was to locate faculty as close to their primary work area as possible. This placement would increase supervision of the work space and tend to make the faculty member more available to students. Thus, the science faculty were housed near the science labs, and the secretarial science faculty were housed near the typing labs. Thus, persons external to the college would understand why faculty offices were placed the way they were in the space program. It was through this document that the academic practitioners indicated to the designers what spaces were needed and how they must be laid out for efficient use. The importance of this document was stressed by Basil Castaldi (1987, p. 142) when he states:

> *"No architect should be asked to plan a school before a complete set of educational specifications has been developed by the educational planners. It is unfair and unwise to ask architects to do both the educational and the architectural planning."*

We found that thorough programming permits clear and concise communication between educational leaders during the planning phase of the facilities planning process. Thinking at this stage of the facilities planning process is also inexpensive. Ideas and further iterations of planning documents are quickly accomplished with no drain on the

project budget. This fact should not be overlooked because the situation changes once the project moves into the design phase and legal contracts are signed.

Summary

The educational planning phase took us from the college mission to an extensive program of educational specifications. The people involved, the pathways used, and the information gathered were all dictated by the overall guiding philosophy. That foundation philosophy holds that the users, of a facility are able to provide the best information on its intended use. Assuming this information is used during the subsequent phases of the facilities planning process (design and construction), it should ensure a useful, functional educational facility.

The planning information gathered during this phase all derived from the college mission. Each layer of data was dependent on a prior layer, and all information was collected in the educational specifications document. In many ways, this document represented the materialization of the five-point planning philosophy that guided the facilities planning process. The educational specifications document for the Lynn project was logical and sequential. In was reviewed and approved by the entire college community, and it represented the embodiment of our thinking and academic vision of the new campus.

The educational specifications document is the finished product of one intense phase of the facilities planning process--the planning phase; it is also the starting point of the next phase in the facilities planning process, the design phase.

CHAPTER FOUR

DESIGN

The Traditional Design Process

The design phase of a facilities planning project begins when the owner of the proposed facility awards the design contract to an architectural firm and ends when the completed design plans and specifications for the facility are accepted by the owner. Traditionally, the design phase of a facilities planning project consists of four major components.

The first component, **the initial phase**, is a brief but intense period of user architect interface where the focus of the architect is on developing, or reviewing, the educational specifications or program for the project.

The second component, **the schematic phase**, is when the architect converts the approved educational specifications into two dimensional schematic design drawings (i.e., line drawings showing spaces and their relative locations and sizes) that attempt to capture the needs and intent of the owner as described by the educational specifications. During this phase the focus of the designers shifts from an understanding of the needs and desires of the owner to the expression of those needs and desires in an initial facility schematic or diagram. This design phase often signals the shift of project responsibility from the college to the

designer. While during the first phase educators transmitted project information to the designer, during this phase the designer begins to transmit project information back. Meetings between the user and the designer are less frequent and are primarily scheduled by the designer on an as needed basis.

The third component, **the design development, or preliminary phase**, is an intense period of design and systems (e.g., electrical, mechanical, plumbing) coordination that transforms the line drawings of the second phase into detailed technical documents for all systems within the facility. During this phase, which commences when the owner approves the submitted schematic design drawings, only sporadic and infrequent interaction between the architect and user take place.

The fourth component, **the working drawing phase**, consists of the architect detailing all plans, coordinating the specifications and preparing all documents necessary to secure owner approval and comply with construction bid regulations. During this phase, which commences upon owner approval of the technical documents prepared in the third phase, the owner-architect interaction is distant and normally involves little or no personal interface.

In summary, then, the traditional design procedure and pathway involves decreasing user-architect interaction. Procedurally, the Lynn campus design phase followed these

traditional four components. However, the development mechanism of the four components was radically different. The difference consisted of a continued high, and constant, level of interaction between the users and the architect through all four phases. Two of the critical issues to unravel here are the reasons for and consequences of this high level of interaction. The reasons are many, and can be seen by considering the design process from both user's and architect's perspective.

Design Phase Process and Logistics

From our, the user's, perspective, it was central that we continue to implement the five points of philosophy that were used during the planning stage. The only way to accomplish this was via a constant give and take with the designer. We made it our business to be involved and consulted on all design activities. From the architect's, Earl Flansburgh's, perspective, our daily availability and involvement, coupled with our overall knowledge of the project and educational specifications allowed the project to proceed faster and with fewer changes. In the business world time is money, and both of these facets resulted in cost savings to the designer. Thus, a mutually advantageous system was established that met the goals of both parties. The users were able to have continued input into the facilities and the designer benefitted economically from the

relationship.

Returning to the logistical aspects of the design phase, after the educational specifications were approved by the college, they were delivered to the M.B.R.C.C. for review and comment. Following discussion of the educational specifications document with M.B.R.C.C. staff, the Lynn campus project was placed on the agenda of the Sites and Facilities (S & F) sub-committee of the M.B.R.C.C. for their review, comment and action. The chairman of S & F at the time, O. Robert Simha, Director of Institutional Planning at the Massachusetts Institute of Technology, was well aware of the ongoing investigation into state construction projects. He was, therefore, reluctant to approve projects that were not well documented and defensible.

During the S & F meeting where the Lynn project was on the agenda, Mr. Simha began the discussion by probing into the relationships between academic programs and classroom size. He wanted to know how the sizes of the classrooms were determined, and if the sizes requested were adequate to support the intended purposes. Throughout the meeting Mr. Simha raised questions on many aspects of the educational specifications document. According to Simha (1989):

> *"The educational specifications document has to be a clear statement of what the academic program intent and objectives are, what the subject matter is, how many people you feel you*

need to serve, what the requirments of the specific program are with respect to environmental or physical conditions and what the minimum and maximum class size is going to be."

In each instance his concerns were satisfied by explaining the process employed in the development of the specific document sections and the rationale and calculations used to derive the number and size of classrooms. Also during the meeting, the capital outlay budget estimate prepared for the proposed project was questioned. By showing committee members the link between the educational specifications and the projected construction cost per square foot for the project, it was possible to satisfy their concerns about the capital budget. During the meeting the college representatives, the users, responded accurately and in detail to all these questions, because they had been involved in all phases of the project.

Mr. Simha reported the committee's findings and recommendation at the following full Board meeting. The Board accepted the sub-committee's findings including the project budget for construction and approved the Lynn campus construction as detailed in the educational specifications. Subsequently, the Board staff notified the Bureau of Building Construction (B.B.C.), the state agency responsible for overseeing all capital building projects, of the Board

vote and requested that appropriate action be taken to begin the project. The B.B.C. assigned a project manager and notified the Designer Selection Board (D.S.B.) of the need for a designer. The D.S.B. staff, after reviewing their records, notified the B.B.C. and the M.B.R.C.C. of the fact that a design firm for North Shore Community College had been selected years prior and all that was required was to amend the designers' existing contract. Thus, the design firm of Earl R. Flansburgh and Associates (E.R.F.A.) of Boston, was notified of its role in the project, and their contract was subsequently amended. The project manager from the B.B.C. then scheduled a project information meeting in order to develop a plan of action and establish a meeting schedule.

During the project information meeting, the college insisted that person(s) representing the B.B.C., college, and designer meet on a weekly basis. It was further stressed that I, as project overseer from the user's viewpoint, was commited to work with the architect to accomplish the task as outlined in the educational specifications. The architect, Earl Flansburgh, agreed with the weekly meetings schedule and welcomed my commitment to the design effort.

My insistence on weekly meetings stemmed from my strong belief, acquired from years in the construction field, that the user's (i.e., educational) perspective must be present

and heard throughout the design phase. A great deal of user insight, clarification and direction is required during this design process to ensure that the needs and desires of the users as contained in the educational specifications are accurately and fully interpreted in the technical documents (plans and specifications) which define the facility. By my being present at all meetings a constant two-way communication link between the college and designer was maintained. Questions raised during these meetings were addressed immediately or returned to the college for a more detailed, but always timely review discussion, and response.

State Reorganization of Higher Education

Just as the design phase of the project was about to begin, the state legislature approved the Acts and Resolves of 1980 Chapter 329 Section 112, which reorganized the governance of public higher education and established one overarching Board. The new legislation (Massachusetts General Law Chapter 15A) abolished the Massachusetts Board of Regional Community Colleges, and Board of State Colleges and the University Board. These Boards were replaced effective July 1, 1980 by the Board of Regents, a single Board responsible for all three levels (i.e., community colleges, state colleges, and universities) of public higher education in Massachusetts. At approximately the same time, the state legislature responding to the Report and

Recommendation of the Ward Commission, voted into law the Omnibus Construction Reform Act, Chapter 579 of the Acts of 1980. The Omnibus Construction Reform Act of 1980 significantly revamped the administration of public building construction projects in Massachusetts. Every aspect in the development of a state building project, from conception through planning, design, bidding, construction, and maintenance, was altered by Chapter 579. The legislation eliminated the Bureau of Building Construction effective July 1, 1981, and replaced it with the Division of Capital planning and Operations, under the Secretariat of Administration and Finance.

Suddenly, where there was once a support system (M.B.R.C.C. and B.B.C.) for college construction projects, there was a vacuum. The transition of authority was slow and awkward. The magnitude of change initiated by the Ward Commission within such a compressed time frame confused state government to the point of paralysis. Time was needed to study the new legislation and determine who had authority to do what, and under what circumstances.

The transition concerned me, for I felt the total project was at a very critical juncture and that this disruption of the state approval process could have long-term negative effects. Concerned employees working at state agencies were reluctant to discuss construction or decision processes, let alone take responsibility for a new capital

project the size of the Lynn Campus. Partly out of frustration, but also out of concern for the continued progress of the project, I decided to assume the responsibility for coordinating every facet of the project external to the college. This decision was not without problems; I was working full-time off-campus with multiple state agencies that for me lacked the support system, communication, and understanding of purpose that reinforced the earlier planning stage. To help resolve this problem I decided to introduce myself, and the project, to the top managers at each state agency. During these meetings I explained the scope of the Lynn campus project and asked for their opinion on what was the best way for me and the project to interface with their agency. Often I was informed of key individuals within their agency with whom I should meet, or briefed on ways to eliminate bureaucratic red tape between agencies.

In time, I was recognized in all forums and agencies as the person to contact should there be a question having anything to do with the Lynn campus project (see Appendix 14). The shift from the internal (on-campus) domain to the external (off-campus) domain dramatically increased my scope of work, which ballooned to include seven major sub-projects that required considerable planning and stewardship. The seven major sub-projects were:

1. Estimating the total project cost and developing

the appropriate capital budget.

2. Locating the appropriate site and beginning the process of site acquisition by means of eminent domain.
3. Developing a total project schedule and coordinating it with the on-campus operational planning process.
4. Actively participating in the design process including all meetings with state agencies.
5. Planning for business relocation, site demolition, and campus construction.
6. Coordinating the fixed furniture and equipment needs.
7. Keeping all political and elected officials informed.

The absence of Board authority at this juncture of the project raised many concerns. Primary among these was the fact that we were preparing to design a campus to be located in Lynn on a site the state did not own, and, according to the laws of the Commonwealth, this was illegal. According to the laws of the Commonwealth, one can plan, but not design or construct, a state facility or project on land not owned by the Commonwealth. In view of these laws, the designer had legitimate concerns about undertaking such a design. The intended site for the new college had the

approval of both the local and state elected officials. It consisted of 10.85 acres of land located in the downtown area of Lynn, involving twenty-nine separate parcels of property collectively declared a blighted area by insurance carriers. Even though the selected site had unanimous support, no action was taken by either the state or the M.B.R.C.C. to acquire it. Reorganization of public higher education temporarily halted major educational project planning and left the M.B.R.C.C. operating in a passive, rather than active, mode.

I decided to discuss my concerns with the Speaker of the House of Representatives, Thomas W. McGee, and Senate Majority Leader, Walter J. Boverini, both from Lynn. I strongly suggested to them that the M.B.R.C.C. vote to acquire the site in Lynn by eminent domain at its last board meeting in June. This action would temporarily appease the architect's concerns and show positive intent to the incoming Board members of the new Board of Regents. I explained the process required to take the site by eminent domain, including land surveys, site and business appraisals and title searches. At a subsequent meeting with (former state senator) Jack Buckley, President of the M.B.R.C.C., and also attended by myself, Boverini and McGee, all agreed the vote was important to the future of the project and hence, the land taking for the Lynn campus would be on the agenda of the next and the last M.B.R.C.C. meeting. The

documentation required to support the Board action (i.e., site survey, appraisals of real and personal property, title searches, and legal descriptions) was assembled and delivered to the M.B.R.C.C. office. At the final Board meeting, President Buckley introduced the Lynn land acquisition item. The Board voted to approve the site acquisition for North Shore Community College in Lynn by eminent domain.

Initial Design Phase

The M.B.R.C.C. action provided the basis for the architect to begin to prepare the documents needed to identify the college site and properly locate the proposed campus on the site. Having thus relieved the architect's concern regarding site acquisition, the project focus finally shifted to the designer's office and the first phase of design. The beginning of the design also signaled the transition of project responsibility from *"on-campus"* to the bureaucracy of the state agencies external to the college.

Because the educational specifications detailed the functional needs of academics, the designers requested the college carefully consider form issues such as circulation patterns, quiet areas, public use and the proper adjacency of room clusters by floor. When questions were raised during these early design meetings, I recorded the question and, depending on the issue, addressed the question

immediately, called appropriate college personnel for clarification or tabled the question long enough for me to return to the college to discuss the question. Often I would return to the college and review my list of questions with the assistant dean of academic affairs who, after meeting with the appropriate division chair or department head, forwarded the needed information to my office.

During the development of the educational specifications each space was described and justified in detail as described in Chapter 3. Now the relative placement of these spaces was being discussed and decided. Here again we felt that the insight and advice of the users (i.e., the college community) was essential to yield a result that best reflected their needs and desires. Thus, during this first design phase, Dr. Adams and I spent a great deal of time thinking through the assignment of space by floor throughout the building. Work during this stage of the facilities planning effort required constant communication between the architects in the designer's office and the college. Dr. Adams continued to coordinate all academic issues while I coordinated all issues concerning the rest of the college.

From the designer's questions, our own concern about education, and the input from college faculty and staff, we developed a total building logic that came into focus as we assigned spaces on each floor. It was strongly felt that

the library should be the heart of the college. Therefore, it was important that students not have to search for the library but rather see it immediately. Also, each floor of the three-floor facility should have its own identity. The first floor should contain the offices that require public interaction and the dissemination of college admissions and financial aid material. Offices such as registrar, admissions, business office, financial aid and college bookstore all required the movement of people and could generate unwanted noise in classroom areas. Of equal concern was building security; potential students did not have to leave the first floor to find answers to their questions.

The second floor was planned as liberal arts classrooms, business, secretarial, and computer science laboratories, as well as industrial technology laboratory space. The third floor was planned as liberal arts classrooms, natural science laboratories, and computer classrooms. The planning logic produced a building with a busy administrative and student oriented first floor and quiet academic space on the two remaining floors.

Schematic Design Phase

After approximately four weeks of intense review of all academic requirements and initial adjacency considerations, the second phase began with the designer producing sketches

of possible placements of the new campus on the Lynn site. Some alternatives were dismissed immediately; others required careful review and consideration. This review required knowledge of the local environment and awareness of local or state planning that potentially impacted the proper orientation of the campus on the site. In Lynn, the environment on all sides of the campus site was under review and subject to change. For example, a new train station and parking garage was proposed for Lynn, to be located across the street from the campus site. The new station would also include a bus station and parking for 1200 cars. Fortunately, the proposed station was to be located on the downtown side of the campus site which was considered the primary direction from which all foot traffic would enter the new facility. It was learned from the state Department of Public Works that the state highway (1A) on one side of the campus site was about to be redesigned. The redesign was placing strong emphasis on safety and the removal of existing curb cuts (entrance and exits) to improve the safety conditions and the orderly flow of traffic in the area. The campus site had eight curb cuts on to and off of highway IA. I met with the state highway engineers to apprise them of the ongoing Lynn Campus planning and suggested we work together to solve mutual problems. By working together and understanding the total traffic flow we were able to eliminate all curb cuts on the highway side of

the site and plan for college vehicles to enter the site from another side.

By working with the many state agencies involved in project planning in Lynn, I soon became the provider of documents and information for projects around the Lynn site at all Lynn campus design meetings. Once all information was compiled and analyzed the campus was positioned on the site.

Gradually more schematic drawings were produced reflecting the designer's interpretation of the educational specifications and subsequent discussions. I requested that all drawings be submitted to me in triplicate, one for the academic component to review and comment on, one for the other components of the college to review and comment on, and one file copy (see Appendix 15). Upon receipt of drawings from the designer, I held meetings with Dr. Adams to review them and discuss issues of concern. Dr. Adams then met with the academic planning leaders, informed them of the current status of the project, and requested they review the document with their faculties, make the appropriate comments and return them to him. Having thus received comments from the academic component, the annotated drawings with comments were returned by me to the designer for review and discussion with the design team.

As mentioned earlier, our activities during the design phase were directed by the same philosophical guidelines as

detailed in Chapter 3. They dictated the procedure employed for reviewing schematic drawings as outlined above. User involvement differed only slightly, because the arena within which the major effort took place was external to the college: unlike the planning phase, where the major effort was internal. We maintained a link between the two environments by maintaining the single channel of two-way communication through which all information and documents flowed. That single channel was me. Within the college, Dr. Adams was the channel through which all academic information passed.

All work external to the college was approached from the perspective of possibly having to defend our actions in court. Thus, the site acquisition process demanded a great deal of time, because a process that would stand the test of legal action had to be developed. The process we developed had three separate components. The first component was technical and involved the hiring of a surveyor to survey the total site as well as each separate parcel within the site. The second component was legal and involved title searches and preparing the necessary legal documents pertaining to each parcel. The third component was financial and involved setting the fair market value of the real and personal property that together made up the existing site. This arrangement necessitated the hiring of three separate appraisal firms to investigate every aspect

of the site and prepare independent appraisals for all twenty-nine parcels that formed the Lynn site. Three appraisals were made of each parcel simply because experience showed that the owners would challenge whatever figure was established. Traditionally, owners will accept the payment for their property and then take legal action against the Commonwealth for damages. Thus, the stronger the support documentation, the better the defense.

The use of three appraisers did present a major problem that forced me to once again revisit House Speaker Thomas W. McGee. Not being a professional appraiser, there was no justifiable way I, or anyone else at the college, could establish which of the possible property estimates was the proper one. Common sense dictated that the state must have a board or agency that reviews property appraisals for the purpose of determining fair market value. The Department of Public Works (D.P.W.), responsible for constructing state highways, had such a board in its Right of Way Division within the D.P.W. and headed by Joseph Finale. Mr. Finale was willing to help, but he could not commit the resources of his agency without the approval of the D.P.W. commissioner. On one hand, I had a problem. On the other, I had a possible solution. I was prepared to visit the Speaker and request his support for my solution.

In terms of political involvement I worked strictly with state political leaders; I never met with the city

council or Mayor in Lynn. Instead, I worked to keep the elected state officials well informed and let them brief local officials. This process helped reinforce the fact the project was a state and not a local project. More importantly, the process provided both Speaker of the House, Thomas W. McGee, and the Senate Majority Leader, Walter J. Boverini with the project facts. By keeping the key state officials informed, I was able to maintain their strong political support.

When the appraisal problem and the associated solution was presented to the Speaker, he requested that the Governor contact the commissioner of the Department of Public Works and instruct him to authorize the Director of the Right of Way Division to review the appraisals for the Lynn Campus of North Shore Community College. Thus, all appraisals were reviewed by the Real Estate Review Board of the State Department of Public Works (see Appendix 16).

Once all the documents pertaining to the acquisition of the Lynn site were completed and reviewed, the Board of Regents voted to take the land by eminent domain. This was the second time a Board representing the Commonwealth voted to acquire the site. After the Board voted, Board staff members began to question the Board's right to take the land by eminent domain since Chapter 15A did not explicitly state the Board had the authority to do so. Massachusetts General Law Chapter 15A Section 2 stated:

"The board of regents shall, unless otherwise enumerated, be the successor of the secretary of the executive office of educational affairs, the board of higher education, the board of trustees of state colleges and the board of trustees of regional community colleges, the board of trustees of the University of Lowell, the board of trustees of the University of Massachusetts, the board of trustees of Southeastern Massachusetts University, and shall, have all the duties and exercise the powers previously vested in said secretary and boards, unless otherwise enumerated."

On the other hand, some Board staff argued that since the Board of Regents (B.O.R.) was the successor to the M.B.R.C.C., which was explicitly authorized by its enabling legislation to take land by eminent domain, then M.G.L. Chapter 15A, Section 2 extended that power to the Board of Regents. Lacking a definitive interpretation to this problem, the office of legal counsel to the B.O.R. forwarded the concern to the State Attorney General's office for legal interpretation. The Attorney General's office responded that Chapter 15A was unclear, and indeed did not explicitly state the Board had the authority to take land by eminent domain. Further, in the opinion of T. David Raftry,

Assistant Attorney General in charge of the Eminent Domain Division, the power to take land by eminent domain must be explicitly stated in the enabling legislation that created the B.O.R. if the B.O.R. intended to exercise that power. The B.O.R. was advised to hold off any further action on the Lynn site until such time that legal review resolved the wording of Chapter 15A and the state legislature voted to approve the requested changes in the law. Waiting was unacceptable at the time. Any delay in land acquisition would stop design and no one would venture to guess for how long.

Once again, I prepared a solution to the problem and headed for the Speaker's office. I explained the problem with the language in Chapter 15A and requested the Speaker ask Governor Edward King to take the land by eminent domain, for his office clearly had the power to do so. The Speaker spoke to the governor, and as a result, I was instructed to work with Bill Higgas, the governor's chief legal counsel. Finally, after defending all the cost estimates and appraisals at the Governor's Council, the land in Lynn was officially taken by the governor by eminent domain on August 21, 1981 (see Appendix 17).

With the campus site acquired by the state and the campus design well under way, the project rapidly moved from the thinking and documenting stage of campus planning to the real world of contracts where money is important and

individuals are expected to produce on a timely basis.

The design team was sparked with renewed excitement by the land-taking which resulted in a concerted effort to resolve design issues and produce final schematic drawings. Many schematic design schemes were presented and defended by the architect as creative solutions to the program requirements. One scheme had the building designed as one continuous curve that was wider in the center and narrower at the ends. The building *"foot print"* resembled a banana as it curved around the industrial block adjacent to the site. Because the design was one continuous curve, every space within the building reflected the curve. This design was prompted by the designer's concern to blend the facility with the surroundings and wrap the campus around the industrial complex at one end of the site. There were no straight walls and some faculty and administrative offices were pie shaped as the design went from the wider center of the building to the narrower ends. During review at the college, questions were raised regarding the functional fit of these odd-shaped rooms and the need for custom-made furniture for these rooms, as well as potential problems with sight lines from some student stations to the fronts of the classrooms. Consequently, the college suggested that, if the curve was critical to design, a scheme with two rectangular wings and a knee or pie shaped wedge in the center be considered. This suggestion allowed for the

curve, maintained the desired rectangular classrooms and office space and offered a curved area for those special spaces within an educational facility that might be enhanced by a design that is other than rectangular. The college at the same time suggested examples of these types of non-rectangular spaces, including the college bookstore, library, student lounge, and cafeteria. The designer was informed we were looking for simplicity, ease of maintenance, and the ability to use standard, not custom, office furniture. We also wanted faculty offices to be as standard as possible (i.e., the triangular offices were unacceptable). Gradually, the skeletal shape of the campus began to emerge.

During this process much give and take occurred. Educational, architectural and public safety considerations, along with local and state codes and future building operations and maintenance entered into these negotiations. As requirements surfaced that were not of an educational nature they were carefully reviewed by the college community in light of the educational specifications. At times a city or state requirement conflicted with an educational requirement, and the college would propose an alternative, educationally acceptable solution. Everything from the kind and number of deliveries made to the college to the requirements listed by the Lynn Fire Department were included in the discussions that ultimately led to the

design and placement of the facility on the site. For example, the Lynn Fire Department insisted on unobstructed access to all sides of the building. This requirement shifted the proposed facility closer to the state highway on one side and away from an eight-story high, 400 foot long, old shoe factory on the other. Although this move initially raised no academic concerns, a careful review of the architectural drawings revealed that the area of the building closest to the highway contained the library, and that was a concern. Careful review had placed the library in a strategic location within the building, and everyone was pleased with the internal configuration of rooms and adjacencies. The director of the learning resource center believed the proximity of the highway to the library would add noise to an area that required quiet. After many alternative solutions were reviewed and rejected, the ultimate decision was to leave the library in the original strategic location, but have the designer agree to increase the material specifications on the outside glass curtain wall of the library to reduce sound transfer.

During design, it is essential that the cost of the proposed facility be estimated for comparison to the project budget. There are two very different cost estimates normally employed. The estimated construction cost (E.C.C.) refers to the cost of constructing the designed project. The E.C.C. does not include the associated fees such as land

acquisition cost, designer fee, movable furniture and equipment, and project supervision. These costs, along with the E.C.C., make up the total project cost (T.P.C.). During the second or schematic design phase, numerous design adjustments were made like the one detailed above. In all cases the final result reflected educator input to the extent possible given other needs. There is no doubt that this input increased the function of the buildings as specified by the user's. The integration of educational requirements with external design requirements led to the successful completion and acceptance of the schematic design drawings and construction cost estimates in late September of 1981.

Preliminary Design Phase

The third phase, the design development or preliminary phase, began immediately by taking the approved skeletal line drawings of the schematic phase, defining and dimensioning each line and designing the systems that would ultimately be contained within these dimensioned walls. These systems included plumbing, heating, electrical, telephone, computer, fire suppression, framing and air conditioning. These were the systems that ultimately made the building useable. The design of many of these systems was dependent upon the specific need for them within the individual spaces identified during the schematic phase.

within each space the proper penetration of these systems through walls and floors required detailed knowledge of the precise location and function of furniture or equipment to be installed.

This necessitated that the built-in, or fixed, furniture and equipment, such as benches in the physics lab and shelving in the library, be detailed in terms of vendor, model, placement within space, and services needed. Only then could the systems design continue in an effective fashion. In detailing this information, each faculty member was consulted to identify all furniture or equipment that is normally built-in, required water, gas or electrical fixtures, fume hoods, ventilation or special treatment of waste (i.e., chemistry laboratory neutralization tank) or any other special service needs. During this process, as in all prior processes, communication was channeled through one person, and information was transmitted in a consistent manner on consistent forms with faculty approving the final fixed furniture and equipment requests. All other non-academic areas of the college such as the cafeteria, maintenance, security, computer center, and all administrative areas were detailed in a similar fashion. In time, a document detailing all fixed furniture and equipment needs and the detailed service needs of each space within the proposed facility was produced.

Throughout the preliminary design phase certain academic areas required more attention to detail, support documentation, and critical review than others. General purpose classrooms used to teach non-laboratory courses such as English, psychology, history or sociology, required little adjustment or design review. The primary reason for this was the fact that in all general purpose classrooms the faculty requested that: (a) all furniture be moveable; (b) ample blackboard space be provided; (c) a closed circuit T.V. monitor, a computer jack near the teaching station be included; and (d) electrical outlets be located on all four walls in the room.

The lecture/demonstration classrooms required slightly more attention simply because the teaching stations contained a deep sink equipped with water, gas, and electrical outlets to support scientific demonstrations. The special purpose classrooms required a great deal of attention to detail, as well as constant review and monitoring of all design plans. The special purpose classrooms included the science laboratories, industrial technology laboratories, computer science areas, office technology classrooms, and the art rooms. These all required the proper response to many design concerns to adequately service the academic function prescribed. In some instances, the requests were highly specific and detailed due to their complexity or easy misinterpretation.

For example, the science faculty preferred oak cabinetry and tables with black acid resistant tops and further specified Kewaunee, Inc., as their manufacturer of choice. As a result, Kewaunee's representative, Charles Hyde, in collaboration with college faculty, designed the desired fixed furniture and equipment layout for all science laboratory and support spaces in accordance with the dimensions indicated on the preliminary plans. Since they identified the exact location within these spaces for all electrical, plumbing, heating, ventilation, lighting and fire suppression systems, these laboratory layouts proved extremely valuable as the design and construction process evolved. All pieces of equipment were identified by product code and referenced in a support document containing catalog information detailing the specific pieces of furniture or equipment.

As a specific example, the chemistry laboratory required:

- The proper room design in terms of area and adjacency to the central materials and storage areas.
- Detailed design of fixed furniture and equipment including the correct location of eye wash units, dousing showers, fume hoods, and laboratory work stations.
- Connecting all furniture and equipment to the main

electrical system and installing a master kill switch for safety.

- Installing gas to all stations within the laboratory and installing a master shut-off for safety.
- Installing water feeds and returns to all stations, dousing shower and eye washes within the lab.
- Installing fume hoods and ventilating equipment to the outside of the building.
- Installing corrosion proof drains and neutralization tank.

From this brief list, it is obvious the design concerns in special purpose areas are many and detailed. The final decision on each of these concerns potentially impacts the educational function of the space. Fortunately for the Lynn campus project, the person responsible for the Academic Affairs component was a scientist who understood the need for detail to clearly define the desired academic workspace during design.

According to Paul Pagnotti (1990), plumbing engineer for R.G. Vanderweil, the engineering firm contracted to design the fire suppression, mechanical, electrical and plumbing systems for the Lynn campus:

> *"What made the project work so well in Lynn was the unique combination of knowledge and skills that both Terry Neylon and Dave Adams brought to*

the project. Their knowledge of education and how everything should work helped everyone understand the college needs and move the project along. The fact that we were working with one, and at times two people, who understood our concerns and could make timely decisions was of extreme importance to the project. We usually have to deal with a committee that knows nothing or a head janitor that knows less. The fact that Terry Neylon was there every day from beginning of design through the end of construction was great. When we had a question you had the answer on the spot or you made a call to Dave Adams and got it for us. The whole science area, which is usually a problem for us, went smooth. You people supplied the equipment drawings for all the labs and Dave Adams' knowledge was just incredible. For example, we were required by law to submit a notarized list of all chemicals and their amounts used in a proposed lab to the Massachusetts Water Resources Authority before we can make the required connections to the system. On most jobs this is a time-consuming process that often requires a complete inventory of existing material on campus, as well as many

hours of time-consuming interviews with faculty and administrators. In Lynn, Dave Adams not only had it done, he understood the materials and could answer, on the spot, any questions related to materials used or the use of the labs themselves.

On any construction project it is always better to deal with one person than a group, the problem for us is the one person usually doesn't know anything or can't make a decision. This was not a problem with the Lynn project, you were constantly reviewing documents and making on the spot decisions. With the Lynn campus you (Terry Neylon) and Dave Adams were pushing us and believe me you just don't find people who understand the complexity of the problems and are willing to work with you."

At this stage in the design process the preliminary design drawings were well underway. The channel of communications and the system of review was working well when suddenly on November 28, 1981, a major fire, which rapidly turned into a conflagration, broke out next to the college site in Lynn. The fire had an immediate, major effect on the existing preliminary designs. With the large

industrial buildings destroyed by fire, the state Division of Capital Planning instructed the designer to relocate the building on the site. The fire caused major changes in the design plans. It made possible relocation of the building further from Route 1A to help with the noise problem in the library, although the special sound deadening glass was kept, the central entrance was re-designed with major changes.

The removal of the central entrance required rethinking the building's design in light of academic needs. Eventually, the educators suggested the addition of two banked lecture halls, one each on the second and third floor. The lecture halls surfaced as a result of educators and designers working together to solve a design problem that was not anticipated during the development of the educational specifications.

Other concerns that required considerable review and comment by the users involved the site plan, which included the location of the faculty and staff parking lot, student drop-off areas, bus stop, bicycle rack, motorcycle parking area, sidewalks, lawns, trees, garden areas, flagpoles and signs. The decision was made by the users to create a green area between the campus and the highway with a topography that ranged from flat to rolling mounds or small hills. The green area was heavily planted with trees in some locations and less in others. The reasons for the inclusion of the

hilly area were to buffer sound from the highway, to improve aesthetics, and to offer sloped grassy areas for use as classrooms during the summer season. Gradually, the design documents began to reflect the approved needs of the users in all areas. The designer, confident the documents would be approved, submitted them along with construction cost estimates to the college for approval. The documents were carefully reviewed and commented upon by the users and subsequently approved with comments. (See Appendix 18 for Lynn campus floor plans).

Working Drawing Design Phase

Approval by the college of the submitted plans ended the preliminary phase and began the working drawing phase of the design. During the working drawing phase all drawings were coordinated to ensure that everything was where it was supposed to be. All drawings were checked to insure they were architecturally consistent, and every detail required was included to inform the contractor of the designer's intent. As the drawings were being *"cleaned up"* by some members of the design team, others were developing the specifications or written description for the design on word processors. During this phase a considerable amount of time was spent by the design team reviewing paint charts, tiles and carpet samples as well as drapes and proposed building signs. Keying systems for all internal and external doors

were reviewed after which the users selected a system that employed the use of removable cores. This system permitted the college to change all the locks on a moment's notice without calling a locksmith.

A considerable amount of time was dedicated to checking the written description against the approved drawings (see Appendix 19). It is absolutely essential that these two documents are in agreement from beginning to end. Otherwise, during construction when a question is raised the contractor is given an opportunity to select the alternative that best fits his cost concerns and not necessarily the functional concerns of the educators.

This phase of design is alive with anticipation as everyone is eager to produce the working drawings and specifications needed to get the project out to bid. There existed within the design team a sense of relief and understanding that it was time to move on.

The project manager from the Division of Capital Planning and Operations was busy coordinating all the documents required to approve the design and advertise the project. In the Fall of 1982, the working drawings and final construction cost estimate were submitted for review and approval. The documents were approved, and the project was advertised in the major newspapers as well as the state Register published by the Secretary of State's Office. Construction bids were opened in the bid room of the

D.C.P.O., and the project was awarded to the lowest bidder, Wexler Construction Company of Newton Highlands, Massachusetts.

Summary Comments

The design phase of the project began with the educational specifications document and concluded with working drawings from which contractors prepared their bids. Between these two poles intervened massive amounts of give and take as the educational specifications are manipulated to conform to design needs but still reflect user needs.

Earl R. Flansburgh (1990), the project architect for the Lynn campus, expressed the importance of user involvement in the design of a facility when he stated:

> *"The ultimate design of an educational facility is derived from the educational specifications. My experience after designing approximately 100 educational facilities leads me to believe the educational specifications or 'program' is really one of the most important aspects of the educational facilities design process. The program, in my mind, is composed of two pieces. First, there is the static program which is the document that outlines the number and kind of spaces required. And second, there is the dynamic program which evolves from in-depth*

discussions with the client and getting to know more about what is required. The static program is often developed in a variety of ways. Often they emulate the last building the school administration had built, then again, some are simply a synthesis of all the classrooms that currently exist, while others are taken from a plan the senior administrator in charge had left over from the last place he or she worked. The dynamic program informs the design team and helps then understand the functional components that must come together to meet the educational needs.

On any project if there is a shortage of information, then the architect has to do one of two things. Either get the information in some formalized way or make an assumption. What makes a project successful is the dynamic program or component of the educational specifications. The dynamic phase represents a tension between user needs and designer needs. The purpose of user cooperation all during design is to ensure the interests of the user are considered and understood during this dynamic tension."

As stated by David Adams (1991):

"During the design phase, many instances occurred when the architect suggested a direction that would have compromised the educational usefulness of that space. In my judgment, the presence and involvement of college representatives during this entire phase was essential to the preservation of the maximum educational function of the building. I'll give you an example of this. In the academic skills center the people responsible requested special design features such as glass windows on internal walls for supervision, half walls for privacy and circular placement of study carrels for efficient equipment and media use. At one time or another in the design phase all these features were removed by the designer as unusual or unneeded. Only because college personnel were directly involved and able to argue for these features, they were preserved and in fact, are to be found in the facility today."

CHAPTER FIVE

CONSTRUCTION

Introduction

The modern construction process is heavily impacted by legal considerations. When construction contracts are signed, the construction site becomes the legal responsibility of the general contractor, not the user or the awarding authority. In addition, the work of the general contractor is heavily dictated by federal (e.g., the various laws the Environmental Protection Agency enforces and the Occupational Safety and Health Act) and state law, as well as requirements set forth in the construction contract. As a result, the modern general contractor is actually a broker coordinating the construction project through negotiated contractual agreements with many sub-contractors. The general contractor has cost estimators, proposal writers, and lawyers either in his office or under consultation to manage the complex laws, contracts and negotiated agreements bearing on the construction project. For this and other reasons, user involvement during the construction process depends on the user's understanding of construction and the ability to negotiate with the contractor and sub-contractors.

Lynn Campus Construction - Initiation and Logistics

Insofar as the Lynn Project was concerned, approval of the working drawings marked a transition point. Discussion on the design of the facility as well as the amount and placement of fixed furniture and equipment ended. The time for planning and making design decisions ceased, and the time to implement the product of those design decisions began. Larry Gleason (1988, p. 4) succinctly described this general project transition when he wrote:

> *"The pre-construction phase is most critical because the budget is managed during this time. In the construction phase, you manage contracts, not budgets. In the pre-construction phase, you manage decisions affecting the budget and in the construction phase you manage contracts which spend the budget. In the pre-construction phase, change, evolution and redirection are normal. In the construction phase, change must go through a formal proposal and change order process before it can be implemented. The proof of planning in the pre-construction phase is in the implementation or construction phase."*

The completion of the design phase set in motion a sequence of legal events culminating in the award of a contract to construct the Lynn campus facility to Wexler

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Construction Company, a general contracting company in Newton Highlands, Massachusetts. The necessary elements required to construct the campus were in place: a capital budget, an approved design, a building site, and a general contractor to orchestrate the entire process.

The products of the design phase for the Lynn campus, the design plans and specifications, were the central bid documents from which all contractors prepared their construction bid proposals. The contract was awarded to Wexler based on their low bid. After lengthy review of the company's past record and bond capacity, the contract to construct the Lynn campus was prepared by the state's Division of Capital Planning and Operations (D.C.P.O.) as the awarding authority. The base documents referenced in the construction contract were the design plans and specifications. They were an integral part of the contract, because they detailed the work that needed to be done.

When the contractor accepted and signed the contract he was introduced to the principal parties involved in the project at that point. The project manager for the D.C.P.O., John Welch, reviewed the meeting schedule employed during design and suggested the same meeting schedule be followed during construction. The contractor agreed. On March 18, 1983 the official ground-breaking for the project was held at the Lynn site.

Immediately following the ground-breaking ceremony the contractor began construction on the site by removing the old utility lines (e.g., water, sewer, and gas) and installing new ones. Initially, formal construction meetings were held on a weekly basis on the site in a former bank building. As the project progressed, meetings were more frequent and the meetings were moved into the new facility to allow for the demolition of the bank building. The participants in the weekly construction meetings included the project manager from D.C.P.O., the contractor, the architect, and me, representing the college. The primary purposes of these meetings were to: (a) review construction progress and approve payment requests based upon progress to date; (b) establish a construction schedule that included the projected date of completion (accurate information regarding the date of completion was critical to the college because it had to budget and plan for occupancy); (c) discuss any problems encountered and posit possible solutions; (d) discuss change order requests while all parties were on site and could determine the validity of the request; and (e) review alternate material samples chosen by the contractor to replace what was specified in the design plans and specifications.

In Massachusetts, General Law Chapter 149, Section 44A, governs all contracts for public construction projects of a **building** whose estimated cost exceeds $25,000. According to

this law, upon the award of a contract, the contractor must perform all the work in conformity with the design plans and specifications. Further, the contractor cannot unilaterally deviate from the design documents. Any deviation from the design plans and specifications must be authorized by the awarding authority, D.C.P.O. in this case, in conjunction with the designer in writing. During construction this written authorization is called a *"change order."* Although most of the major decisions concerning the construction of the facility are made during the design phase, the potential for significant additional change exists during the construction process.

The contractor does, however, have the right to select materials on an *"or equal"* basis so long as the original material is not designated a priority item in the construction documents. Priority items are included in the construction documents based on recommendations from either the user or designer and with their mutual approval. Materials are often declared priority items, or free from substitution, when the new facility must match existing architecture or equipment on campus. Items such as windows, doors, the size and color of brick, locks, bathroom fixtures, and the surface on basketball courts are often declared priority items.

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Construction Project Change Orders - User Involvement

During the construction of the Lynn campus, change orders ranged from underground obstructions that required excavation to permit the driving of piles to installing more conduit and computer wires in classrooms and the gymnasium in response to user requests. In every case, change orders were reviewed during the project meetings and accepted or rejected for processing after careful consideration of their potential impact on the academic function performed in the area as well as the rationale for the request.

Earl Flansburgh (1990) reported: *"The total of all change orders on the Lynn campus project was less than one percent of the construction cost. Given the problems associated with a project of this magnitude today, this percentage is one we can all be proud of."*

Of paramount importance during the negotiation of these change orders was the constant presence of the users' representative, the presence of whom ensured that input continued even during this, the construction phase. Further, the change orders, just as in the previous component of the facilities planning process, benefitted from the timely input of the users' perspective. This ability of the users to affect the facility during construction is rather unusual, but an opportunity made available by the continued useful involvement of the users during the planning process. The influence of the users

during the final phase of construction expressed itself in many ways, including modifying the facility to accommodate curricular changes and in last minute design changes. Several examples are provided below to illustrate the nature and scope of this involvement.

The appearance of the construction site was rapidly changing. What was once an old business and industrial area was being transformed. The construction fence around the site was erected, the project sign was installed, site work was underway and piles were being driven into the ground to support the new campus. The only problem at the time was dust spreading over the surrounding area from the site work. This problem was abated by spraying the site with water on an as-needed basis during the day.

In time the contractor began to express concern regarding ambiguous statements contained in the contract documents. The problem was that the plans indicated one thing and the specifications indicated something different. For example, the plans called for the finish ceiling area in the corridor outside the library to be plaster while the specifications for the same area called for the installation of a suspended ceiling. The contractor was right, the plans and specifications were inconsistent on this issue. We simply failed to catch this problem during design review. The contractor pointed out the inconsistency and insisted he prepared his bid on the basis of installing a suspended

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ceiling which is much less expensive. He went on to say he wanted a change order and additional compensation should the group insist on the installation of the plaster ceiling; otherwise he would install the suspended ceiling. The architect expressed concern about the appearance of the area outside the library since it is the central area for vertical and horizontal circulation within the facility and should have the more attractive plaster ceiling. The contractor knew he had the upper hand during the discussion and was eager to point out additional problems with the contract documents. The architect was trying to mollify the contractor's concerns and avoid a change order on the basis of a design error. In time, both the architect and contractor were willing to install the suspended ceiling even though it was less than desirable aesthetically. Speaking for the college, I felt the plaster ceiling was more in line with what we wanted and informed the group of that belief. In the end, the plaster ceiling was installed and the contractor submitted a change order for additional payment.

Small problems of this type were common during construction and frequently consumed considerable amounts of time. The specifications constitute a very important document and must be critically reviewed and compared with the associated design plans. Any confusion between the two documents must be addressed during design and **before**

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construction. Another problem that surfaced during construction was the inconsistency of design drawings. During design the architect prepares the architectural section of the building plans and transmits these architectural plans to the mechanical engineering firm where they serve as the base planning documents for laying out the plumbing, heating, electrical, telephone, lighting, fire suppression and air conditioning overlays. These overlays take time, and during this time slight changes are often made to the architectural plans by the architect due to user input or other reasons. When the finished mechanical drawings are returned to the architect the drawings are brought together to form one set of drawings. The final design plans consist of many individual sections, each representing a unique component of the design. If the architectural firm does not take the time to review every plan to ensure they are totally coordinated and free of inconsistent information, the contractor will find the errors during construction. The contractor will raise the issue and insist on a change order based upon faulty design documents and the resulting hardships incurred due to the increase in construction cost.

Similarly, the educational specifications document is subject to change due to ongoing change in educational need. From the time the educational specifications for Lynn were printed in May of 1980 until the beginning of construction

in 1983, three years had passed. During this time some of the educational needs in the greater Lynn area changed. What we planned for in the late seventies, in some cases no longer applied in the early eighties. These changes in educational need could not be ignored and necessitated corresponding changes in the curriculum planned for Lynn.

For example, in the late seventies there was a considerable demand in Lynn for skilled workers in the area of apparel design and upholstery. At the time, manufacturing companies in the area were willing to work with the college to improve their employees' knowledge and skills. In response to this demand the college planned a certificate program to be offered in Lynn and programmed 1300 ASF in the new campus to support it.

In the early eighties the manufacturing plants began to close, eliminating the need for the certificate program. While the need in this area was evaporating, the demand in the area of occupational safety and health was rapidly growing. Issues such as water pollution, asbestos removal, hazardous waste and the use of toxic materials were receiving increased attention. The decision was made at the college to eliminate the apparel design and upholstery program and replace it with the occupational safety and health program. The space needs were identical, only the fixed and movable furniture and equipment were different. All the required changes were reviewed and documented on

campus before they were presented to the architect for discussion. All changes in existing contract documents were made at the designer's office and presented for discussion at the weekly construction meeting. The scope of the change was discussed and the general contractor prepared the appropriate change order.

Because the college was an integral part of the construction process this curricular change was accommodated in a timely fashion, thus responding to both construction cost and educational need.

Construction problems work both ways. The contractor sometimes did not comply with the specifications and was reminded of this fact. On several occasions the contractor violated the specifications and was instructed to remove the area of work constructed in violation of the contract documents. For example, the specifications called for the building to be winterized (closed in with plastic) and heated by portable heating units. The construction documents also specified that the laying of masonry could only occur in temperatures of greater than 40° and rising. On numerous occasions the contractor failed to winterize the structure or was ordered to remove masonry work constructed in temperatures less than 40°.

During one construction meeting I insisted the newly tiled floors in the classrooms be covered with heavy paper to protect them before they were marred by the construction

workers in the performance of their work. The general contractor refused to cover the floors as requested even though the request was consistent with the procedures specified in the construction documents. Instead, the contractor insisted it was common and accepted practice in the construction field to cover the floors with pellets to protect them. He insisted the floors would be better protected by the pellets than the paper and proceeded to cover the floors with red pellets that reminded everyone of kitty litter. The pellets remained on the floors for about two to three weeks before we noticed the floor tiles were discolored. The pellets stained the new floors red. Once notified, the contractor swept up the pellets and scrubbed, bleached and washed the floors numerous times to remove the stains, but to no avail. Later, during the project meeting, the contractor was reminded of his earlier insistence on the use of the red pellets rather than the heavy paper. The contractor insisted we could live with the stained floors for years since they were in classrooms and not a corridor. He was further informed of the fact the taxpayers were paying for new floors in all areas not just corridors. Not willing to entertain further alternatives, I insisted the floors were unacceptable and demanded they be removed and replaced with new. The contractor stated the college was unreasonable to insist the floors should be replaced. However, he subsequently removed the floors in nine

classrooms and replaced them with new tile at his own expense.

Other examples of the contractor's failure to comply with the contract documents involved the storage and use of fixed furniture and equipment during construction, which presented problems from the day these materials arrived on the site. The contractor accepted the delivery of oak cabinetry for the science areas and simply stored it in the most convenient area. While inspecting the construction I discovered workers using the finished oak science cabinets and benches as work benches to mix paint, cut wood and pipe, stack masonry blocks, or to stand on in order to to work above the ceiling. Other pieces of equipment were carelessly left in open areas, exposed to the weather, and they suffered water damage. Because I was on the construction site every day, these issues were brought to the attention of the contractor on numerous occasions and recorded by me in the daily reports that were part of the official record the D.C.P.O. maintained on the project. The contractor, during construction meetings, agreed to correct these problems but later failed to address them entirely.

Eventually, the time came to install the fixed furniture and equipment. The contractor, in total disregard for our expressed concerns, was fully intent on installing the damaged furniture and equipment. At this point I rejected all fixed furniture and equipment that had even the

slightest damage. During the construction meeting I produced a photographic record of the abuse by the contractor of the new fixed furniture and equipment since its arrival on site. I also produced the written complaints recorded in the daily reports, as well as the meeting notes that contained the record of the group discussion and the contractor's response. The contractor was not pleased; he wanted to negotiate the extent of damage to each item and debate how the damage prevented the unit from working. He was informed we were not paying for damaged goods and instructed to replace all rejected items with new. The contractor could not refute the extensive documentation presented and, therefore, consented to replace the damaged furniture and equipment at his own expense. The damaged furniture and equipment was replaced with new and, like the new floors, was properly covered with cardboard and heavy paper to protect them from damage.

In the library the installation of the circulation counter and the stacks presented two annoying problems. First, the lighting in the stack area was designed to be located directly over the aisle between the stacks, but was installed incorrectly and located directly over the stacks. Fortunately, the finish work wasn't complete and the contractor, once notified, corrected the problem. Second, when the circulation counter was installed, it was discovered that one of the pipes that penetrated through the

concrete floor to service the electrical, telephone and computer needs of the card catalog was missing. The catalog was located on the first floor, which is a one-foot thick reinforced concrete slab. Everyone agreed the pipe was missing; it was an oversight; but no one wanted to disturb the concrete slab to install another pipe at this point. After checking with the director of the learning resource center for information and direction on the matter, it was determined the original request was for one terminal, and now the desire was to have four installed. Armed with this information the project architect, Earl Flansburgh, proposed one possible solution to the problem. It involved the use of two tables to be located adjacent to the circulation counter upon which would be located the four terminals. The architects proposal was rejected by the college. After lengthy discussion with the director of the learning resource center, an alternative proposal was presented by the college to the architect for consideration. The architect liked the proposal and presented it along with detailed drawings at the next meeting for approval and processing. The contractor prepared the change order and as directed had the new counter built of the same materials and by the same company that constructed the circulation counter. Upon completion, the unit was installed by the contractor in the library to the satisfaction of everyone. Because the material used in its construction is an exact

match with other furniture in the library, the stations blend in perfectly with the total area.

Lynn Campus - Movable Furniture and Equipment

Concurrent with the supervision of construction, we were busy preparing the movable furniture and equipment needs for the new facility. To this end, faculty, staff, and administration in the college were informed of the need for accurate information pertaining to furniture and equipment needs in their area. Dr. Adams held informational meetings with academic leaders, disseminated standardized request forms which he had he developed, and gradually pulled together the movable furniture and equipment needs for all academic areas. All other college components were coordinated by me using forms which were copied from those developed by Dr. Adams. After considerable review and discussion with appropriate college employees to better understand the individual requests, a master movable furniture and equipment document was produced. Earlier, a capital outlay request in the amount of $3,000,000 was prepared and submitted for movable furniture and equipment. The budget request was approved by the legislature and was added to the project appropriation. The state Purchasing Agent's office was informed of the project status and the pending purchase of movable furniture and equipment. Arrangements were made between the college and the office of

the Purchasing Agent to process all purchase orders and coordinate delivery schedules.

The D.C.P.O., at the college's request, expanded the existing contract with the architect to include the services of his interior design department. The architect's interior design department had personnel with extensive experience in the area of color coordination and product durability and could help the college coordinate the furniture and colors within the new campus.

presidential Involvement

Just as Dr. Adams and I were about to finalize the movable furniture and equipment needs, the executive assistant to the president at North Shore decided the purchase of all movable furniture and equipment for Lynn would be conducted from his office. When I questioned him on this sudden change he stated that, since both Dr. Adams and I were too busy with other projects, the president decided he should assume responsibility for the purchase of all movable furniture and equipment. At the time my concern was not with who did what, but rather the continuance of the two-way communications link and user involvement throughout the process.

Faculty were surprised by the sudden change and could not understand the reason for it. They complained that the president's office was playing games at the eleventh hour.

Academic leaders eager to understand the status of the purchasing process had to schedule a meeting with the executive assistant to the president and defend previously agreed upon requests. According to Thomas Wisbey (1991), Human Services Division Chairman:

> *"Suddenly things were not easy, the process changed, the president's office unilaterally eliminated a great deal of the individual items we worked so hard to locate. Programmatic needs were not considered, instead all furniture and equipment was standardized. I had to fight for what we needed. They cut back my furniture and equipment order considerably. I was told certain items they could not find a vendor for, and I had to find the vendor for a "round table" myself. The faculty were disillusioned, we had a glimmer of what our areas could be and all of a sudden it was pulled away and we were excluded."*

The sudden change from the process employed from the outset of the project created a credibility gap between the executive administration and the rest of the college.

Lynn Campus - Construction and Review for Final Acceptance

On the construction site, many persons were preparing

"punch lists" of items that were not finished as specified in the contract, even though the contractor reported they were. One by one every room in the campus was inspected by the same group that met during construction. The punch list was typed up and every member of the group received a copy. The contractor assigned workmen to correct the items on the punch list and when finished notify the group the area was ready for final inspection. Once all items listed were corrected the documents were prepared by the D.C.P.O. for the college to accept the new facility.

While these documents were being prepared the movable furniture and equipment began to arrive at the site. We planned for all deliveries to be made at the loading dock accompanied by a team of manufacturer's representatives that assembled the furniture and equipment in the proper location and tested it before we would sign off on final acceptance. Dr. Adams and I developed a room numbering system for every room in the facility, and the numbers were installed at this time. Of great importance to me was the operational status of the heating, ventilation and air conditioning system which had never been tested. The contractor had the mechanical engineers inspect the system and prepare it for full operation. Because the general contractor used the lights in the building during construction every bulb in the campus had to be removed and replaced with new. Everywhere within the facility there was intense activity. The

telephone company was busy installing phones, the computer company was installing a main computer, windows were cleaned, floors were washed, and waxed, and the building began to look like a campus and not a construction site.

When the project was finished important facts related to the construction began to surface. Primary amongst them were the facts the project was completed on time and under budget. The college accepted the new facility on October 15, 1985.

In 1986, Zvi Lamm presented a paper at the Edusystems 2000 International Congress on Educational Facilities held in Jerusalem, Israel which focused on changes in the physical environment of education. The paper was entitled: *The Architecture of Schools and the Philosophy of Education*, and it posited a very interesting and a strongly worded claim. According to Lamm (1986, p. 5):

> *"When an educational change is not accompanied by some measure of change in the organization of the physical environment (i.e., a change in the architecture in its wider sense) then the desired educational change is no real change."*

If Zvi Lamm is correct, then who will insure the educational change is properly reflected in the physical environment if not the educator?

Summary

The construction phase of the project continued to manifest the five basic philosophical points outlined during the planning and design phases. This ensured a constant user input throughout the entire construction process and, as a result, a facility which reflected the needs and desires of the educators who would occupy it and give it life. Further, as a result of user input during the construction process, the facility reflected their needs on a timely basis unlike many facilities that are outdated upon occupancy. As stated several times earlier, the ultimate measure of the utility of the building is the extent to which it supports the instructional efforts of the users upon occupancy. This subject, then, is explored and documented in the next chapter.

CHAPTER SIX

USE AND OCCUPANCY

Introduction

On Monday the twenty-seventh of January, 1986 the Lynn campus of North Shore Community College opened for classes offering twenty-four academic programs (see Appendix 20) during the day and an extensive list of credit and non-credit courses during the evening. Although the campus opened in the middle of the academic year the initial enrollment of 1100 students by head count confirmed earlier planning estimates. The enrollment in Lynn grew to 1424 students by head count in September, 1986 and continued to grow. In the Spring of 1991 semester the enrollment was reported to be 1492 students by head count. These enrollment figures suggest that the curriculum planning process for the Lynn campus accurately reflected the academic needs of the area.

Between the time the college accepted the completed campus on October 15, 1985 and the arrival of the first contingent of students, many activities and much preparation occurred. In November of 1984, I was appointed Campus Director of the new Lynn campus. It was my responsibility to coordinate the day to day functions of the new Lynn campus. Our first order of business was to ensure the facility was operationally maintained and secure. Concurrently, college staff spent the period of time between

October 15, 1985 and January 27, 1986 preparing the campus to receive its first complement of students. To that end, tasks from installing pencil sharpeners to moving faculty and staff into their new offices were accomplished. With the help of the local fire department, we developed emergency assistance plans which included the exact location on each floor to which handicapped persons in wheelchairs should go to in event of an emergency. Also, emergency egress charts were developed and installed in each classroom to direct the occupants to the primary and if needed, secondary means of egress from that room should an emergency exist.

Considerable attention was given during this time to assist the faculty. Bulletin boards, charts, pictures, and even plant hangers were installed. Once the initial surge to move into the facility subsided, a list of room assignments by name and numbers was circulated to every office along with an in-house telephone directory.

Also during this time it became apparent that the operational planning effort for the new campus had not kept pace with nor been coordinated with the developmental planning effort. For example, the college budget process did not plan for nor did it request additional money to staff, heat, light, maintain and secure the new campus. Further, the operational college budget did not provide for the purchase of new books for the new library in Lynn.

These weaknesses within the operational planning process began to surface as the construction of the Lynn campus approached completion. We learned from the facilities planning process that of equal importance to the ultimate users is a concerted effort on the part of the college to operationally plan for the day the new facility comes on line. Ideally, the commencement of both the operational and developmental planning efforts would begin when the need for new facilities is first discussed. Although operational planning for the Lynn campus was discussed frequently, the executive administration did not assign nor did they assume responsibility for it. On campus there prevailed a sense of distance between the new campus project and the day to day operation of the college.

Once it became apparent that the campus was fast approaching completion, the magnitude of the operational planning effort was realized on campus. A sense of urgency surfaced on campus as operational oversights were exposed. To solve the problem of the operational budget, the college had to submit a special budget request for $1,000,000 to the Speaker of the House, Thomas W. McGee. Fortunately, the Speaker was able to push the special request through both the House and Senate, and ultimately, the special request amount was added to the college operational budget. At the same time, the college requested financial assistance from the Board of Regents for the purchase of books for the

library in Lynn. Luckily, the Board of Regents was able to transfer $130,000 to North Shore Community College for the purchase of the needed library books (see Appendix 21).

At North Shore we learned the hard way that educational facilities planning requires two major planning efforts that plan together and constantly communicate with each other. We also found that when a problem or weakness exists in either the operational or developmental planning, that problem will surface at the point where the two planning efforts intersect. That point of convergence occurs the moment the college accepts the facility for use and occupancy.

Lynn Campus User Interviews/Outcomes

One key indicator of how well a facility reflects the needs and values of the user is whether the facilities support the activities of the occupants. In the development of the educational specifications these needs and values were sought by Dr. Adams and me, and documented. During the design and construction phases they were defended by Dr. Adams and me, and upheld. The satisfaction of the user with the final facility, specifically their spaces of interest, is thus an indicator as to the success of this process. If the majority of faculty and staff express a great deal of satisfaction with the end results of the facilities planning process, this provides evidence that their needs and desires

were sought, documented and represented throughout the design and construction phases. If a significant number of faculty and staff express dissatisfaction with the end results of the facilities planning process, this would provide evidence that somewhere in the process their needs and desires were not addressed. Thus, an assessment of the ability of the facility to support the activities of the current users was undertaken to provide information about the process employed in the development of the Lynn campus project. For this reason many faculty and staff were interviewed by me seeking information on this point. During the interviews, current occupants expressed almost universal satisfaction with the facilities, specific rooms used by them and their layout, and fixed furniture and equipment. On the other hand, current occupants expressed general dissatisfaction with the moveable furniture and equipment supplied to the Lynn campus.

When I interviewed faculty members and college staff at the Lynn campus, they were eager to explain their role in the facilities planning process and quite proudly explained the rationale that helped shape their design concerns. Often during the interview the faculty member or college staff person would point out the results of their planning effort as well as the functional utility of the resulting work area. One such person was Joseph Boyd, Assistant Coordinator for the Center for Alternative Studies in Lynn,

who explained how he was actively involved in the planning of the testing center in Lynn and went on to express strong approval for the manner in which the facilities planning effort in Lynn was carried out. Mr. Boyd (1991) discussed his role in the process and reported:

> *"Because of the specialized nature of our area and the fact we always worked in makeshift temporary space, we were a unique office that evolved over time that could best evidence our own needs. We learned from experience and blended our understanding of need in accordance with Massachusetts Department of Education guidelines on security for General Education Development (G.E.D.) testing centers. Security is extremely important in our areas and testing demands uninterrupted periods of quiet exam time. Our center supports the New England region and tests students in the College Level Examination Program (C.L.E.P.), American College Testing (A.C.T.), the Defense Activity for Non-Traditional Activity Support (D.A.N.T.A.S.), and the Psychological Corporation Nursing Entrance Examination (P.C.N.E.E.). We in the center understood the unique nature of our needs and the planning process allowed us to detail and defend our concerns at every level of the*

facilities planning process. There was no other testing center in the area that anyone could go to and learn from in terms of design."

When asked to comment on the relationship, if any, between the input he made during the planning and design process and the constructed facility, Mr. Boyd stated:

"The design of the testing center reflects my input exactly. Our active involvement in the planning process cultivated a sense of pride, belonging and ownership that still exists today."

According to Thomas Wisby (1990), chair of the Human Services Division at N.S.C.C.:

"The ability to think through and design our own area was a learning process for myself and others in the Human Services Division as well. Our input was encouraged all during the facilities planing process and we took full advantage of the opportunity. The ultimate design really is a perfect design; it works so well, students stop in before class to talk with faculty and after class as well. The design encourages social interaction and helps to reinforce the educational process. The design

of the facility reflects my input, the fact that faculty and students identify with the area and interact so well is really a pleasant bonus."

Professor Abe Sherf (1990), Department Chair of Economics, History and Government, reported:

"We (the faculty) were an active partner in the planning process. It was a continuous process; we were consulted at every step of the planning process, and our desires and suggestions were respected. Faculty participated in the planning process because they knew their input was being considered. The building was designed in such a way that it is not sterile and is conducive to mutual relations between faculty. The contact between faculty and students is also good. Many of the students are from Lynn and tell me that they would never have gone to college if the campus was not located in Lynn. The fact that the college is located in downtown Lynn has enhanced the neighborhood and the ability of the local students to attend college."

Dr. Robert Baker (1991), Chair of the Humanities and Social Services Division echoed the words of Professor Sherf when he stated:

"The design of the Lynn campus creates an environment that supports faculty interaction as well as faculty and student interaction. In Lynn there is a real sense of professionalism and cooperative understanding that does not exist in Beverly."

When asked to comment on the planning process, Ronald Tagney (1991), Professor of History and Government at N.S.C.C., stated:

"The role of the faculty and staff is essential during the planning of educational facilities. From a practical point of view they have information nobody else has, actually. From a morale point of view it's a one in a million opportunity for an institution to function as a unit. It's that very rare opportunity when everyone can be involved and feel a part of something, forgetting any kinds of rivalry or animosities that might have existed before."

In the natural science area I interviewed Professor Frank Day (1991), Professor of Chemistry and conceptual designer of the chemistry laboratory in the Lynn campus. When asked to comment on his role in the planning process he reported:

"The design of the chemistry laboratory first came to me years earlier while day dreaming on a hunting trip. Traditional chemistry laboratories have all kinds of shelves, glassware and equipment located between the students and professor which prohibits simple lectures, discussions or blackboard examples. From years of experience teaching chemistry I have learned that a brief five or ten minute discussion in the laboratory really helps students understand and learn to solve many problems. My plans called for a chemistry laboratory with the stations located on three sides of the perimeter of the room and the fourth wall designed as a teaching station. This plan allowed for the middle of the room to have tables and to be used when needed as a classroom. I recorded my ideas and submitted them during the planning process. I had input into the planning process from beginning to end, and today the laboratory is built just as I wanted it. More importantly, I have found sight line and eye contact in the laboratory is greatly improved, and the students now seem to enjoy the environment."

Anne Johnson (1991), Director of the Learning Resource Center at North Shore Community College reported:

> *"The library in Lynn works very well, it is simply great. Without question the students enjoy the library; as a matter of fact the library is heavily used. During the FY 90 academic year the library recorded (by gate counters) approximately 75,000 student and general public visits. We were very pleased with the library. The computer catalog is wonderful; it works well where it is located. The library is aesthetically pleasing and reflects our requests throughout."*

Time and again faculty and staff reported that they were involved in the planning and design of the campus and the facility reflects their input.

The needs of the ultimate users that were recorded in the educational specifications and later reflected in the campus design were again represented during construction and manifested in the final facility. This transition was accomplished by active representation by educators from the beginning of the planning process to the end of construction.

Conclusion

What does this general satisfaction expressed by users say about user involvement in design and construction? Having established, from the interviews conducted, that the final facility in fact reflects user input, the question remains, would the final facility have been any different if these user inputs were not generated initially in the form of educational specifications and were not represented in the process at every step along the way?

In order to demonstrate the possibility, if not probability, that the same facility would not have emerged without user input, the following evidence is provided. Joseph Boyd's Center for Alternative Studies is a unique academic area at North Shore Community College, having evolved over several years. Its function and therefore precise space needs are not something one would be likely to find elsewhere. As Mr. Boyd indicated in his interview: *"The center requires a unique blending of many counseling, teaching, testing, advising and security issues that the architect would not have had prior experience with."* Mr. Boyd went on to say: *"working knowledge from years of experience was the only way they, in the center, knew how to juxtapose the various spaces to maximize functional utility."* Being a non-traditional, non-standard space which is not duplicated or modeled in previous facilities, it is unlikely the designer would have provided the spatial

arrangements as described by Mr. Boyd without user input and representation.

The chemistry laboratory in the Lynn campus was another example where the ultimate users (Professors Frank Day and his students) indicated their extreme satisfaction with the ultimate design but had to defend design concerns from strong opposition in the designer's office. When these unique design concerns for the chemistry laboratory were presented to the architect, the architect couldn't understand the reason for the open area in the center of the room and immediately suggested we revisit the traditional design for chemistry laboratories. The mechanical engineering firm did not like the idea of fume hoods located on all four walls in the laboratory. They wanted to *"simplify"* the design and locate all the fume hoods on one wall which consolidated the duct work into a single chase system or shaft. The College argued that the single chase system was not an issue since the chemistry laboratory was located on the top floor. The fact the laboratory had no windows was challenged as was the requirement for a floor drain under the dousing shower. If this design hadn't been written down, if it hadn't been represented every step of the way, it is highly probable the college would have obtained a traditional chemistry laboratory as suggested by the architect and the engineers.

As the individual responsible for representing the user

needs external to the college, I could do so only to the extent the users took the time to document their needs and continued to inform the process as the need arose so I could accurately represent them in other forums.

For example, in the human services area, one particular room was planned to house a very unusual academic function called early childhood and child development. Within the classroom area Mr. Wisby, division chair, requested a sink be installed with base cabinets. The architectural team responded to this request by suggesting the faculty member and students use the bathroom located at that end of the building. This then would eliminate the need for running pipes to and from the classroom area. The college responded by explaining the essential purpose of the sink to allow for hand washing and water activities that occurred in support of the academic program. In the absence of this explanation, which was given because the college was represented during construction when this issue surfaced, the sink would have been eliminated to the detriment of the planned curricular programming.

In the same human service area, faculty members requested a movable, sound proof room divider to allow for separate small group sessions to take place simultaneously and privately in the same room. The designer proposed the elimination of this request because they claimed enough spaces were available to accomplish the small group meeting

in other parts of the building and that no room dividers were completely sound proof. The former objection demonstrated the designer's lack of understanding of the instructional process in the social sciences, where it is central to rapidly move between large group and component small group settings. In the absence of user involvement it is probable that this instructional advantage would have been lost.

In the academic skills center, the users requested several unusual instructional devices such as window walls, partial walls and unusual circular study carrel arrangements. All these requests were based on the experiences of the professionals in this area. The window walls allowed supervision of the entire skills area. The partial walls within the skills area created the feeling of privacy without completely segmenting the space, and the circular carrel's allowed economy of audio-video equipment. The designer recommended against all these innovations largely because these were non-standard. Only because the users were represented during the design process did these items remain in the design and ultimately show up in the completed facility. As Marilyn Dorfman (1990), Director of the Academic Skills Center recently stated: *"The structural recommendations that we made based on our experiences are working out exceptionally well. The center is efficiently staffed, has an open feeling yet provides the opportunity*

for privacy. The operation of the design is working exactly as we had envisioned it."

In addition, another area which has a bearing on the effectiveness of user input is the purchase of all movable furniture and equipment. As stated previously, while there was universal satisfaction with the design of the facilities and the fixed furniture and equipment, there was universal dissatisfaction with the movable furniture and equipment purchased in Lynn.

These sharply contrasting viewpoints may provide some evidence as to the value of user input. The difference in these two processes was that while the users had continued input every step along the way for the design of the facility and fixed furniture and equipment, when it came to movable furniture and equipment, they did not. For example, as stated earlier in Chapter Five, this process was initially conducted by the planning team until such time as the vice president took it over. The process then was outside the main planning effort and void of user communication. The end result was people did not get what they wanted. For example, Joseph Boyd reported:

> *"I had no idea what was going on when I ordered equipment. I was told one thing by the administration and received another. I ordered five four draw file cabinets and received five three draw file cabinets. We could not exchange*

the cabinets or correct the problem, instead we were told to work with what we got. We had to build shelves in a closet to make up the loss of the fourth draw. In the reception area, I ordered a reception table and was told it was not the kind of furniture the college was going to purchase. I was told the same thing when I ordered a pamphlet rack. The end result was I had to purchase the reception table for our area at Morgan Memorial and pay for it myself."

Thomas Wisby expressed his dissatisfaction with the process employed to purchase the movable furniture and equipment when he reported:

"During the planning, design and construction of the campus we were part of the decision-making process. When it came time to finish the area off by purchasing the proper furniture and equipment that would make the design purposeful and functional the process changed. We submitted our request as directed by Dr. Adams and were later informed the process changed. After a period of time I inquired into the status of the purchase and delivery of the requested furniture and equipment and was informed by the president's office that our

request was pulled away in lieu of standard furniture and equipment. Suddenly, cost and standardization rather than educational purpose and need was driving the decision-making process. One simple example is that of a round table I ordered for the conference area and was told it was no longer available. I located the vendor myself and eventually purchased the table I needed. The real tragedy was faculty were given a vision of what our areas could be and at the eleventh hour had it pulled away from them."

Insofar as the users are concerned, the final test of the utility and effectiveness of a particular design is the use of the designed space in the performance of their intended function. This final test therefore had to await the occupancy and use of the Lynn facility. As a result of the interviews and information provided in this chapter, it would appear that the users are very satisfied with that part of the planning process into which they had continued input, but highly dissatisfied with those aspects of the process into which they did not have such input and access. Further, several specific instances have been cited where user input and continued involvement and representation were essential to the final design and facility outcome. For example, evidence is presented that the library, Center for

Alternative Studies, chemistry lab, academic skills center, and human services area would have been altered from the users recommendations if the designers were allowed to operate in the absence of user representation. Since, in all these cases, the users have expressed their high level of satisfaction with the utility of these spaces, it can be concluded that user input and involvement resulted in the emergence of a facility that more effectively supports the activities and endeavors of the faculty and staff.

Finally, during the interviews several instances of a weakness in the planning process surfaced. Most occurred as a result of a lack of adherence to the five philosophical points, including continued user input and representation, upon which this entire process was based. These weaknesses, recommendations for their corrections, and a detailed summary of those components of the planning process that did lead to effective planning are included in the final chapter, Chapter Seven.

CHAPTER SEVEN

CONCLUSION AND RECOMMENDATIONS

Conclusions

The assertions guiding this study as originally stated in Chapter One, are:

> *"The concerns and values of educators are essential in the design and construction of facilities in order to maximize the effectiveness and utility of those facilities. In addition, a second assertion is that the values of educators, the ultimate users, are more likely to be manifested in the completed facility when those values are actively represented from the beginning of the planning process to the end of construction."*

The information and evidence presented and analyzed in this case study provide strong support for these assertions. Many instances have been documented throughout this study where the utility and effectiveness of the final facility were directly related to the original recommendations of the ultimate user. In many of these cases, the only source of this design information was in fact from the users, since the designs were unique, with no prior precedent. Thus, it was unlikely that the designer alone would have arrived at

the same design as suggested by the users. Further, it has been documented several times that the original, unique design of the users very probably would have been altered during the design process had these design considerations not been documented early and continually supported throughout the entire planning process. Also supporting the assertions are instances where the input and recommendations of the users were not sought or represented throughout the entire process with the result of dissatisfaction on the part of the users.

This case study about planning and building a new college in Lynn, MA is intended, in part, to provide guidance to those charged with the awesome task of dealing with the deterioration of the country's educational facilities and in its need for new facilities. If educators are to maximize the potential of the physical facilities which will be required to address the country's educational crises, then the responsibility to deal with the problem must not be assigned to the planners and architects alone.

Specific Recommendations Regarding the Planning Process to Ensure User Involvement and Input in the Final Facility

The purpose of this section is to review those processes, procedures, and concepts which evolved during the facilities planning process as described in this study. Each of these processes, procedures, and concepts have been

shown to assist in the construction of an educational facility which more effectively supports the activities of the users.

1. The planning philosophy was founded on the fundamental belief that the users of the planned facility best understood the academic functions to be performed therein. Thus, the users' insights, direction and thoughts were essential if one wished to ensure, to the maximum extent possible, that the form of the facility--the design--best supports and enhances the desired educational function.

The philosophy had five guiding points:

   a. Acknowledge that the users must inform the planning process.
   b. Maintain a logical flow to the planning process.
   c. Encourage the participation of the entire college community.
   d. Generate, to the maximum extent possible, agreement by consensus.
   e. Establish and maintain a constant and consistent mode of communication.

2. In any educational facilities planning process it is important that all educational planning documents and data be collected in one place. This master planning document called the educational

specifications should contain such things as:

a. Mission statement

b. Enrollment projections

c. Projected curriculum offerings

d. Number of classrooms required and their size

e. The number of faculty and staff

f. The proper amount of support space

g. All the details that link these various components together.

3. The users should insist upon their involvement and active participation from the very beginning of design through the very end of construction, including the selection and purchase of fixed and movable furniture and equipment. This involvement and participation should be consistent with the five philosophic points outlined on page 158.

4. The facilities planning effort should be guided by persons with the appropriate responsibility and authority. There should be one individual, *"a project czar,"* who has complete responsibility for the project and authority to make major project decisions. Reporting to the *"czar"* within the college, should be persons representing each college component. Each of these should also have complete responsibility for their components and the authority to make major decisions. The project czar

should have the following characteristics.

a. Knowledge of both academics and construction
b. Awareness of local and state politicians and the political processes
c. Primary motivation to provide the best functional college as recommended by the users (this quality also pertains to the component leaders).

Specific Recommendations Regarding Improvements to the Facilities Planning Process

a. The acquisition of movable furniture and equipment should be administered in conformity with the same five philosophic points outlined above in order to ensure user involvement and hence maximum effectiveness of the final facility.
b. Operational and developmental planning operations should occur in parallel and interact with each other.
c. The executive administration (President, Vice President and Deans) of the institution should be informed and actively involved throughout the entire process. In the absence of this direct involvement on the part of the executive administrators a knowledge gap may develop between those involved in the planning process and the executive

administration. The gap may widen as the project develops and eventually result in situations where the participants are addressing the same issue but from two totally different knowledge bases.

d. All institutional components should appoint persons responsible for coordinating the planning effort of that component.

In recent years a great deal has been written about the deterioration of our nation's higher education physical plant. Today, the scope of the problem is evident; unfortunately, the solution is not. Recently, John A. Dunn, Jr. prepared a monograph titled: **Financial Planning Guidelines For Facilities Renewal and Adaption**, which was published by The Society for College and University Planning in 1989. In his work John Dunn (1989, pp. 5-6) reported:

> *"Recognizing the extent of the problem, a number of institutions and states have begun in the last few years to put significant sums into renewal projects. A variety of funding mechanisms has been used, including increased allocations from current operating budgets, special-purpose burrowings, and altered fund-raising strategies. A crash program of facility fixup, like a crash diet, will at best provide only temporary improvement. If long-term habits of underfunding are not changed, the problem is*

certain to persist. The key question is this: How much should be spent over the long run to preserve the value of an institution's plant assets in a changing world? Although there is some thoughtful literature in the field, there is no consensus on an approach and no one agreed-upon methodology for its use."

The message of this paper as derived from an analysis of the Lynn campus project is that sums of money themselves are insufficient to build and renew education facilities so as to ensure their maximum utility in the support of the activities of education. The vast resource of information which the educators themselves possess must be injected into the building and renewal processes. This can be accomplished best by the active participation of the users in the planning, design, and construction processes. Further, this participation must be continually maintained through all the planning phases. This paper describes one process that has demonstrated success in ensuring this involvement.

ACT ESTABLISHING MASSACHUSETTS COMMUNITY COLLEGES

CHAPTER 605, ACTS OF 1958

jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions.

SECTION 17. The provisions of chapter four hundred and fifty-seven of the acts of eighteen hundred and ninety-nine and of chapter five hundred and twenty-five of the acts of nineteen hundred and one and of all other general or special laws, or parts thereof, inconsistent herewith and of any zoning ordinance of the city of Boston are declared to be inapplicable to the state office building, or any other facility or structure constructed under the provisions of this act. The provisions of section four of chapter sixteen of the General Laws shall not apply to the provisions of this act.

SECTION 18. Section twelve of chapter sixty-three of the General Laws is hereby amended by inserting after paragraph (r) inserted by section eleven of chapter seven hundred and one of the acts of nineteen hundred and fifty-seven, the following paragraph: —

(s) Bonds or evidences of indebtedness issued by the Massachusetts State Office Building Association.

Approved October 9, 1958.

CHAP. 604. AN ACT FURTHER REGULATING THE DISPOSAL OF CONTAINERS USED FOR REFRIGERATIVE PURPOSES.

Whereas, The deferred operation of this act would tend to defeat its purpose which is, in part, to immediately extend the provisions of law requiring an owner of certain containers used for refrigerative purposes to remove the door thereof before discarding the same so that said provisions shall apply to any person discarding such a container whether or not such person is the owner thereof, therefore it is hereby declared to be an emergency law, necessary for the immediate preservation of the public safety.

Be it enacted, etc., as follows:

Chapter 271 of the General Laws is hereby amended by striking out section 46, as amended by section 1 of chapter 191 of the acts of 1954, and inserting in place thereof the following section: — *Section 46.* Whoever discards or sets aside for failure to use a container originally used for refrigerative purposes without first removing the door or doors, unless the container may be easily opened from the inside, shall be punished by a fine of not more than one hundred dollars.

Approved October 9, 1958.

CHAP. 605. AN ACT ESTABLISHING A MASSACHUSETTS BOARD OF REGIONAL COMMUNITY COLLEGES AND PROVIDING FOR THE ESTABLISHMENT OF REGIONAL COMMUNITY COLLEGES.

Whereas, The deferred operation of this act would tend to defeat its purpose, which is to provide immediately for an expanded regional higher educational program for the commonwealth, therefore it is hereby declared to be an emergency law, necessary for the immediate preservation of the public convenience.

Be it enacted, etc., as follows:

SECTION 1. Chapter 15 of the General Laws is hereby amended by adding at the end the following section: — *Section 47.* There is hereby established in the department, but not subject to its control, a Ma[illegible]

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chusetts board of regional community colleges, hereinafter called the board, which shall consist of fifteen members, including the commissioner of education, the president of the university of Massachusetts, a president of a state teachers college elected annually by the presidents of the state teachers colleges including the Massachusetts school of art, a president of a Massachusetts technical institute elected by the presidents of such technical institutes, and eleven members appointed by the governor with the advice and consent of the council, at least one of whom shall be the president of a private college, university, or junior college in the commonwealth. The members shall serve without compensation, but shall be reimbursed for their actual and necessary expenses incurred in the performance of their duties. The governor, in his initial appointments, shall designate three members to serve for six years, three members for five years, two members for four years, one member for three years, one member for two years, and one member for one year. Upon the expiration of the term of office of a member of the board his successor shall be appointed for a term of six years. The governor shall from time to time designate one of the members as chairman. The board shall appoint and fix the duties of a chief administrative officer, to be known as the president of the Massachusetts regional community colleges, and may employ and fix the duties of such other persons and expend such funds as are necessary to carry out the functions of the board, within the limits of the amounts appropriated therefor. The board is hereby authorized and empowered to receive and use such private foundation funds or such federal funds as may be available in the carrying out of its functions. Said president and all employees of the regional community colleges shall receive such compensation as the board shall determine, and shall not be subject to chapter thirty-one.

The duties of the board shall include the determination of the need for education at the community and junior college level throughout the commonwealth, and the development and execution of an over-all plan to meet this need. The board shall then establish and maintain regional community colleges at suitable locations in accordance with this plan. The board shall have the power to construct, lease or otherwise provide any facilities required for these colleges, including the right to take land for such purposes by eminent domain under the provisions of chapter seventy-nine. The board may also enter into agreements for the use of local facilities with a local school committee or other local authority or jointly with local school committees or other authorities of two or more cities or towns; provided, that the board and the local school committee or committees or other local authorities, shall have the right to review this agreement for the use of local facilities at any time. The board may, upon six months' notice and after consultation with the local school committee or committees or other authorities, require changes in such an agreement or discontinue the agreement. The school committee or school committees or other local authorities may discontinue the agreement at the close of any academic year, provided at least six months' notice is given to the board.

The board shall have general supervision and control of regional community colleges established under the provisions of this section, shall select the dean and other officers of each college and shall define their duties and tenure of office.

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The board shall have complete authority with respect to the election or appointment of officers and professional staff, including their dismissal, promotion, demotion and transfer, including the assignment of their respective ranks and duties within quotas and titles established in the appropriation act by the general court. For the purposes of this section, professional staff shall include all persons employed for actual instruction of students and corresponding positions in the fields of experiment, extension, law enforcement and related activities.

The board may hire such professional personnel at a rate above the minimum and within the grade to which the position is allocated upon determination by the board that the person to be employed has served satisfactorily in a comparable position for a period of time equivalent to the period required by the general salary schedule had such service been entirely in the service of the commonwealth.

The board may, without prior approval, within the limits of appropriation made therefor, engage consultants and lecturers and employ such temporary professional employees at rates and in titles corresponding to permanent positions authorized for these colleges as they shall determine necessary for the operation of the colleges for periods not exceeding the fiscal year.

The board may, notwithstanding the provisions of section twenty-one of said chapter thirty, authorize the payment of overtime or extra compensation to such professional employees, within the limits of appropriations made therefor, for such services rendered in summer sessions or other periods outside the session periods of the normal academic year; provided, that the trustees shall determine that such services shall not interfere with regular full-time activities as provided by law required of such professional employees. The board shall establish the curricula which shall be substantially equivalent to the first two years of college education, including post-high school professional or vocational education, and may establish programs of adult education; shall fix the tuition to be charged, and may grant the degree of Associate in Arts or Associate in Science, or both such degrees, to persons who complete the required courses of instruction in such colleges.

Each regional community college established under this section shall have an advisory board to consist of ten members appointed by the governor. The members shall be residents of the region served by the college. In the initial appointments, two members shall be appointed to serve for five years, two for four years, two for three years, two for two years, and two for one year. Upon the expiration of the term of a member of an advisory board his successor shall be appointed for a term of five years. At least one member of each advisory board shall be a representative of business, and one shall be a representative of labor.

SECTION 2. Chapter 71 of the General Laws is hereby amended by inserting after section 80, inserted by chapter 127 of the acts of 1958, the following section: — *Section 81.* Notwithstanding the provisions of sections seventy-five to seventy-nine, inclusive, no junior college shall be established by a city or town after January first, nineteen hundred and fifty-nine.

SECTION 3. Chapter 73 of the General Laws is hereby amended by striking out section 7, as most recently amended by chapter 309 of the acts of 1957, and inserting in place thereof the following section: —

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Section 7. The department may grant the degree of Bachelor of Education or of Bachelor of Science in Education to any person completing a four-year course in a Massachusetts state teachers college, and the degree of Master of Education to graduates of colleges or universities who have satisfactorily completed a graduate course of instruction in any such teachers college. The department may grant the degree of Bachelor of Fine Arts to any student at the Massachusetts school of art upon the successful completion of certain four-year prescribed courses in the field of fine arts.

SECTION 4. Section 9 of said chapter 73, added by section 4 of chapter 620 of the acts of 1948, is hereby repealed.

Approved October 3, 1958.

CHAP. 606. AN ACT PROVIDING FOR THE CONSTRUCTION, MAINTENANCE, REPAIR, OPERATION OR LEASING OF A GARAGE FOR THE PARKING OF MOTOR VEHICLES UNDER BOSTON COMMON IN THE CITY OF BOSTON AND CREATING THE MASSACHUSETTS PARKING AUTHORITY, DEFINING ITS POWERS AND DUTIES, AND PROVIDING FOR THE FINANCING OF SUCH GARAGE.

Be it enacted, etc., as follows:

SECTION 1. *Declaration of Necessity.* — It is hereby declared that the free circulation of traffic of all kinds through the streets of the city of Boston is necessary for the rapid and effective fighting of fires and disposition of police forces in said city and for the health, safety and general welfare of the public, whether residing in said city or traveling to, through or from said city in the course of lawful pursuits; that in recent years the parking of motor vehicles in the streets of said city has so substantially impeded such free circulation of traffic as to constitute at the present time a public nuisance endangering the health, safety and welfare of the general public, as well as endangering the economic life of said city; that this parking nuisance is not capable of being adequately abated except by the construction and operation of a garage under Boston Common in said city; that notwithstanding chapter two hundred and ninety-four of the acts of nineteen hundred and forty-six, and subsequent acts amendatory thereof, and chapter seven hundred and one of the acts of nineteen hundred and fifty-seven, such a garage has not been constructed; and a public exigency exists which makes the provisions of this act a public necessity.

SECTION 2. *Definitions.* — As used in this act, the following words and terms shall have the following meanings, unless the context shall indicate another or different meaning or intent: —

(a) "Authority" shall mean the Massachusetts Parking Authority, created by section three of this act, or, if said Authority shall be abolished, the board, body, authority or commission succeeding to the principal functions thereof or to whom the powers given by this act to the Authority shall be given by law.

(b) "City" shall mean the city of Boston.

(c) "Cost of the project" shall embrace the cost of preparing plans and specifications for, and constructing the garage, tunnel, and underground passageway, as hereinafter defined, including all necessary and

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CAMPUS CONSTRUCTION DOCUMENTATION (9/5/1969)

September 5, 1969

Mr. John Spiby
Massachusetts Board of Regional Community Colleges
141 Milk Street
Boston, Massachusetts

Dear John:

I am submitting the following suggestions, as per Chapter 767 Acts of 1969, Item 8070-52.

Planning for the physical facilities to be located on the new campus for North Shore Community College should include the following:

General Purpose Classrooms
Library
Learning Resource Center
Administration Facility
Science Laboratories
Technical Laboratories
Physical Education Facilities
Student Union with Cafeteria
Art and Music Facility
Auditorium
Planetarium

Sincerely,

Harold E. Shively
President

HES/hmm

cc. Dr. Dwyer

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APPENDIX 3

LETTER REGARDING LOCAL POLITICAL SITUATION OF N.S.C.C. - BEVERLY (5/22/1975)

City of Beverly

OFFICE OF THE MAYOR — MASSACHUSETTS

May 22, 1975

Mr. Theodore Chase
Palmer & Dodge
One Beacon Street
Boston, Massachusetts

Dear Mr. Chase:

I would like to take this opportunity to restate and to clarify the position of the city officials relative to the parking problem in downtown Beverly.

We received many complaints from merchants and concerned citizens regarding the lack of available parking spaces in Beverly as a result of the location of North Shore Community College in the downtown area. To this end, a series of meetings were held with area residents and merchants, college officials, town officials, and local legislators. The consensus of the meetings was that the North Shore Community College would seek space outside of the downtown area and relocate as many students as possible in a less congested area.

The college has proceeded to fulfill its commitment to the City of Beverly by renting space outside the downtown area. This space will allow approximately half of the North Shore enrollment to be moved to the new location which in turn will alleviate the serious parking problem downtown. The City feels that the college and the Board of Trustees have acted in complete accord with the desire of city officials and the residents and merchants of Beverly.

Sincerely,

James A Vitale

James A. Vitale
Mayor
City of Beverly

~~Enc. (1)~~
V/g

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APPENDIX 4

GOVERNOR DUKAKIS LETTER REGARDING DOWNTOWN SITE FOR N.S.C.C. (7/5/78)

THE COMMONWEALTH OF MASSACHUSETTS

EXECUTIVE DEPARTMENT

STATE HOUSE • BOSTON 02133

MICHAEL S. DUKAKIS
GOVERNOR

July 5, 1978

Mr. James A. O'Shea, Jr.
83 Washington Street
Salem, Massachusetts 01970

Dear Mr. O'Shea:

I appreciate your letter concerning the future site of North Shore Community College. Since my own position on this has been subject to some confusion, I would like to clarify it.

I am not advocating the removal of North Shore Community College from Beverly. Beverly has an historic claim to the College, and is working hard to locate a downtown site for the College. This is a welcome development. I have not supported the proposal to locate NSCC at Beverly's Norwood Pond because of my strong feeling that the state should locate its facilities whenever possible in our older urban centers. By locating state facilities in downtown areas we encourage the revitalization of these areas, and make the facilities accessible to public transportation.

I am concerned that, after all these years, a new site for NSCC be found and developed expeditiously. We have learned from past experience that it is unwise to pin all our hopes for a state project on a single area before specific, feasible plans are drawn. To identify downtown Beverly at the outset as the single site for NSCC is to risk some delay and frustration down the road. It has been common knowledge throughout the North Shore that the City of Lynn is interested in offering a downtown location for NSCC, if only as a back-up to Beverly if Beverly's plans do not materialize for some reason. Given that serious downtown revitalization studies are under way in both cities, I think it would be wise for the Board of Trustees of the Regional Community Colleges to consider both options carefully. I have enclosed a copy of my letter to Chairman Hamilton of the Board, and a copy of my recent letter to Mayor Fortunato, for your further information.

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The Board of Trustees must make the final decision, of course, and I will not attempt to influence the outcome. I do think the course of action I have outlined is a pragmatic one, however, and I hope it will be pursued.

Thank you for your concern.

Sincerely,

Michael S. Dukakis

MSD/lac
Enclosures

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JUL 5

Governor Michael Dukakis
State House
Boston,Ma

July 3, 1978

Dear Sir;

As a member of the North Shore Community College Advisory Board, I am deeply disturbed by recent events regarding the site for the college. It would appear that several changes in rules have happened since this process started. I was present at the meeting in January and listened with interest as the State board outlined its feelings about the site. I became aware of Lynn's renewed interest and felt, much like yourself, that healthy competition might result in careful planning and eventually lead to an excellent facility. The subsequent sessions in which Lynn and Beverly both made their presentations, based on the Boards criteria, were well done and I was most encouraged that a resolution was at hand.

To now realize, through newspaper releases, that neither plan is acceptable because of land area requirements, not originally included in the Boards specifications causes me to wonder what is going on. This decision can only cause confusion and I trust not to mention the expense to both cities in further presentations. Since I believe you are honorable and attempting to do whats right, I would appreciate your explanation as to what has caused this shift in policy.

I have to point out that my sympathies lie with Beverly and their commitment over the years certainly, in my judgement, places them as the number one choice.

Your own posture of not wanting to get further involved seems somewhat weak after your turning down Norwood Pond and your steadfast refusal to move from your urban site position. You are involved and I feel you should now instruct the Board to decide at once and get this college built before the entire moral of the faculty and students are destroyed.

Your early comments would be appreciated.

Very truly yours,

Paul Hill

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APPENDIX 5

GOVERNOR DUKAKIS LETTER REGARDING N.S.C.C. CAMPUS LOCATION (1/19/1978)

MICHAEL S DUKAKIS
GOVERNOR

FRANK T KEEFE
DIRECTOR

THE COMMONWEALTH OF MASSACHUSETTS
OFFICE OF STATE PLANNING
JOHN W MCCORMACK BUILDING ROOM 2101
ONE ASHBURTON PLACE
BOSTON MASSACHUSETTS 02108
617 727 3253

January 19, 1978

Louis Barrier, President
North Shore Community College
Advisory Board

Dear Mr. Barrier:

The Governor has asked me to share with you the attached letter which he has written to Mr. Charles Hamilton. The letter states the Governor's views on the matter of a permanent home for North Shore Community College, and reflects his deliberations with the Executive Office of Educational Affairs, the Development Cabinet, and the Office of State Planning. As you will note, the Governor's prime concerns are that a siting decision be made expeditiously, and that a general commitment to downtown locations become the guiding principle of the siting deliberations which the NSCC Advisory Board and the Board of Regional Community Colleges now face.

Thank you for this opportunity to communicate our views.

Sincerely,

FRANK T. KEEFE
Director of State Planning

FTK:jg

Attachment

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THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE DEPARTMENT
STATE HOUSE BOSTON 02133

MICHAEL S. DUKAKIS
GOVERNOR

Charles C. D. Hamilton
Board of Regional Community Colleges
470 Atlantic Avenue
Boston, MA 02110

Dear Mr. Hamilton:

I would like to take this opportunity to present my views, and those of the Office of State Planning, the Development Cabinet, and the Executive Office of Educational Affairs, on the matter of a permanent location for North Shore Community College.

As you probably know, I have the gravest reservations about the Norwood Pond site. As all critics of that site have recognized, it is distant from any of the downtown urban centers on the North Shore, and offers them no economic stimulus; it will encourage car-dependency on the part of its students, faculty, and staff; and its development is seriously and expensively constrained by ledge formations and wetlands. For all these reasons, the Norwood Pond site runs counter to our Growth Policy for the Commonwealth, and it is my hope that both the North Shore Community College Advisory Board and the Board of Regional Community Colleges will agree with these objections and turn to other sites.

On the other hand, I am acutely aware of the lengthy period of delay during which the Commonwealth's promise to provide a permanent home for this important institution, and to infuse a critical expenditure of capital funds into the economy of the North Shore, has gone unfulfilled. I urge that a siting decision be made as expeditiously as possible, and that design and construction be implemented expeditiously thereafter.

In keeping with both of these policy priorities--a downtown site and rapid progress--my Administration has supported, with considerable enthusiasm and staff time, the recent efforts to locate the College in the USM facilities in downtown Beverly, while facilitating the reciprocal move of USM to the Norwood Pond site. The

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Charles C. D. Hamilton January 19, 1978

problems which have arisen in the path of this initiative solution have culminated in the decision of the NSCC directors not to proceed further with the project.

In that light, we must move quickly again with a shared sense of direction toward a suitable alternative. I have noted with much pleasure the stated desire of both the City of Beverly and the City of Lynn to offer downtown sites for NSCC's permanent home. A downtown location, if feasible, would fulfill the strong desire to see major state facilities located in such a fashion as to contribute to the revitalization of our older urban centers. Beverly has a historic relationship with the College, so there is an obvious logic to retaining downtown Beverly as the home of the College, if an appropriate site can be assembled within a reasonable period of time. Lynn, the central city of the North Shore region and the largest contributor of students to the College, has an equally persuasive case to make. The Lynn case is buttressed, as you know, by the mutually supportive relationship which would exist between the College and the Blue Line terminus, which will be located very close to the proposed NSCC site.

The course which I would like to recommend consists of a thorough and comparative feasibility analysis, to be performed by the Board of Regional Community Colleges' architectural consultant, of downtown locations on the North Shore. This analysis should dovetail, in particular, with two downtown revitalization studies which are already planned or underway:

- the comprehensive downtown improvement study to be performed for and with the City of Beverly by the Department of Community Affairs, to be conducted during the first half of 1978; and

- the study of downtown revitalization benefits to be generated by the Blue Line extension to Lynn, about to be commenced by the firm of Anderson-Nottor under contract with the MBTA and the Urban Mass Transit Administration, and in close concert with the Lynn Department of Community Development.

I would hope that the Board's feasibility analysis would produce a recommended downtown site in the very near future, and that the conversion of the basic feasibility findings into a plan for the NSCC campus could begin shortly thereafter. Working together, there is no reason we cannot make and begin to implement a sensitive siting decision--one that meets the program needs of the College and the revitalization needs of a city on the North Shore--

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this year. Then the long-awaited fulfillment of the promise to the students of the North Shore can become a reality.

I look forward to working with you on this exciting project in the weeks and months ahead.

M.B.R.C.C. MINUTES AUTHORIZING N.S.C.C. LYNN CAMPUS (10/31/1978)

MASSACHUSETTS BOARD OF REGIONAL COMMUNITY COLLEGES

Minutes of the Meeting. . . . . October 31, 1978

A special meeting of the Massachusetts Board of Regional Community Colleges was held in the Board office on October 31, 1978, Chairman Charles Hamilton presiding.

MEMBERS PRESENT	Charles Hamilton, Chairman	Heinz Bondy
	Errol Jacobsen, Secretary	vice David Knapp
	John Manning	Edward McGuire
	vice Gregory Anrig	Robert Mattingly
	John Bradshaw	Kermit Morrissey
	Muriel Camarra	O. Robert Simha
	Roger Schinness	
	vice John Duff	
MEMBERS ABSENT	John Hickey	Alan Sinclair
	Elizabeth Johnson	Fred Thompson
	Patrick Jones	
	One vacancy	

ALSO PRESENT
Mayor Peter Fortunato, Beverly
Mayor Antonio Merino, Lynn
Ms. Frances Alexander, Chairperson, Board of Aldermen, Beverly
Mr. Richard Dober, Planning Consultant
Mr. Earl Flansburg, Architect for North Shore Community College
Ms. Dorothy Shukri, Executive Office of Educational Affairs
Attorney Joseph Furnari
President James Houlihan, Middlesex Community College
President Jules Pagano and staff members John Costello, Joseph Pyne and Hazel Genereau

CALL TO ORDER — The meeting was called to order by the Chairman at 1:50 p.m.

MIDDLESEX — Trustee Simha reported that considerable work has been done to move the purchase of the Marist property forward. The purchase and sale agreement could be executed on November 6 and papers passed on or before December 15, 1978.

On motion of Trustee Simha, it was
VOTED to authorize and empower, under the appropriate laws, the President of the Board to acquire by quitclaim deed a good and clear title to the land owned by the Missionary Sisters of the Society of Mary, Inc. and the Marist Fathers of Boston in the Billerica/Bedford area of Middlesex County for the permanent site of Middlesex Community College. The purchase price for said real estate shall be two and one-half million dollars ($2,500,000).

NORTH SHORE — Mr. Dober, planning consultant, reviewed the three alternatives proposed for the location of North Shore Community College 1)a permanent site for a central campus in Lynn, a permanent site for a central campus in Beverly, a permanent site for a central campus in Beverly and a campus center in Lynn. He enumerated the salient factors which gathered

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momentum and weight in shaping their recommendation for the location of the college presented at the October 19, 1978 meeting. Funds are available to commence the project if there is approval of a site location concept for the college. The five major factors Mr. Dober stressed are as follows:

1) Demographic uniqueness of the area - there are high and low density populated cities in the service area, the overall picture showing growth, with the largest increase in population expected in the northern section.

2) Accessibility - The Lynn site is accessible by public transportation to those living in the southern section, but is very disadvantaged to large numbers of students who would have to come by automobile from the middle and northern sections. Beverly has limited public transportation accessibility and none now in the planning stage. It is primarily accessible by automobile, which could pose some problems to those living in the southern section. The concept of a central campus in Beverly and campus center in Lynn together address the issue of accessibility. The college has worked out an educational plan dated October 31, 1978 that would provide equivalent,equal, equitable educational opportunities for all students served by the college.

3) Availability of sites - The Report documents why the planning consultant and the architect believe 50 acres is a reasonable site for a central campus. Lynn does not have a site that would meet that criteria, Beverly has several good choices in that regard. Lynn does have a 10-acre site suitable for a campus center which would advance that community's economic development, as would the the central campus in Beverly, and the two together would advance, sustain and support economic development in the region as a whole.

4) Capital costs - these have been estimated for a central campus as follows: Lynn core site, $65-73 million; Beverly core site, $58-71 million; 50-acre sites in Beverly ranging from $36-46 million.

5) Timing - both core sites would involve many landtakings and elaborate relocation processes for a central campus. A Beverly 50-acre site on Norwoods Pond or the golf course would take significantly less time. As to the concept of a central campus in Beverly and a campus center in Lynn, the Lynn activity on the 10-acre site can begin immediately. The college has worked out an operable plan for proceeding with that concept.

Mr. Earl Flansburg, architect for North Shore Community College, said they had done twelve different studies of the various sites involved. He showed drawings of how they had tested the sites to see if the sites could accept the facilities, using the 50-acre criteria - buildings (3 or 4 stories) occupying approximately 4 acres; circulation and landscaping, 10 acres; play fields, 13 acres; surface parking, 19 acres; and expansion 4 acres - and concluded that since a 50-acre site does not work well in either core location, the Beverly central campus of 50 acres and a Lynn campus center for 1,000 FTE students and 500 cars seemed to be the ideal solution.

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Trustee Simha read a letter from Mayor Fortunato of Beverly that indicated that the city's preference continues to be the Norwoods Pond site, the site is ready to be developed, there are no strings attached which could occasion any further delay. Trustee Simha said there is a private parcel of land which the Board was in the process of acquiring. Money has been appropriated for its acquisition, and execution of the final step could be accomplished rather quickly. He recalled the restrictions in the deed to the golf course as described last month, but said they should not be insurmountable should the City of Beverly wish to pursue the site with the Board.

There was a lengthy discussion about the various aspects of the three alternatives. Trustee Simha spoke of the considerable amount of work done by the Facilities and Sites Committee during the summer and since, most of the time when the Committee had only one member (Trustee Simha), and the intensive work done by Messrs. Dober and Flansburg. This has resulted in the best information that can be obtained for the Board to use in making its decision. He repeated his statement of last month to the effect that "the Board would be most irresponsible if it attempted to locate a full campus in Lynn, because 1) it would be in one extreme end of the service region and would penalize everybody else in the region, and 2) it would do to the center of Lynn what I, as a professional planner, would in no way want to be associated with, notwithstanding the ambition of the City of Lynn for the revitalization of its downtown." He continued, "To bring 2000 additional automobiles into the city without any major highway inprovements would be more than a disaster, it would be criminal on our part...what we have recommended for Lynn will provide a comprehensive institution in the right place at the right time at the right scale."

On motion of Trustee Simha, it was
VOTED BY ROLL CALL to accept the report of the Facilities and Sites Committee and the recommendation that the central campus for North Shore Community College be located in Beverly and the Campus center be located in Lynn.
(Roll call - in favor: Trustees Camarra, Jacobsen, Bondy (vice Knapp), Mattingly, Morrissey, Simha. Opposed: Manning (vice Anrig), Bradshaw, Schinness (vice Duff), McGuire, Hamilton).

The selection of the specific site in Beverly will be made after further study.

ADJOURNMENT 3:25 p.m. On motion of Trustee Bradshaw, it was
VOTED to adjourn.

Respectfully submitted,

Errol Jacobsen, Secretary

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APPENDIX 7

LAND SWAP ANALYSIS AND LEGAL OPINION (4/21/1982)

April 21, 1982

Mr. Terrence Neylon
c/o North Shore Community College
3 Essex Street
Beverly, Massachusetts 01915

Dear Mr. Neylon:

This letter will serve as a supplement to my March 25, 1982 informal analysis of the need for legislative approval for diverting public land to an inconsistent public use, and will answer your question relating to the "public use" doctrine of eminent domain as it applies to governmental versus proprietary interests of government.

In response to your present question, an analysis of "public use" is required.

"Public use" is considered "public benefit" and it is not considered essential that the entire community or even any considerable portion thereof should directly enjoy or participate in any improvement in order that it constitute a public use.

Nichols on Eminent Domain (Vol. 2A), Section 7.2(2), page 7-30.

It has been said that the requirements as to public use, for a law embracing the taking of land are as follows:

(1) That the law effect a community as distinguished from an individual;
(2) That the law control the use to be made of the property;
(3) That the title so taken be not invested in a person or corporation as a private property to be used and controlled as private property; and
(4) That the public reap the benefit of public possession and use, and that no one exercise control except the public.

Ibid, p. 7-33.

So that the use of property to obtain the possible income or profit that might inure to a city from its ownership and control would not be a public use, and a city cannot take property for such a purpose.

Opinion of the Justices, (1910) 91 N.E.105, 204 Mass. 607.
Opinion of the Justices, (1921) 131 N.E.25, 237 Mass. 598.

Taking of property by eminent domain is an attribute inherent in sovereign power, and it cannot be contracted or bartered away, or abridged so as to bind future legislation or gratuitously restricted.

Burnes v. M.D.C. (1950) 92 N.E.2d 381, 327 Mass. 731.

ROCCO LATTANZIO, JR.
Counsel, Right of Way Bureau
Department of Public Works

RLJ/bm

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Library References

States ⇐119. C.J.S. States § 204 et seq.

Notes of Decisions

In general 1
Cities and towns 7
Higher education 8
Massachusetts Bay Transportation Authority, public corporations 5
Private corporations 6
Public corporations 4, 5
In general 4
Massachusetts Bay Transportation Authority 5
Public purpose 2
Validity of legislation, generally 3

1. In general

Resolves 1964, c. 107, which reasonably faced and sought to overcome emergency presented by shortage of housing available at low rentals to persons of low income could be for public purpose but bill authorizing state agency to finance building or rehabilitation of housing would not serve public purpose in so far as it provided housing for families of moderate income, and possibility that rents paid by moderate income families would subsidize lower rents paid by low income families was too indirect and uncertain to enable court to say that expenditure of tax money under bill would be for public purpose. Opinion of the Justices (1968) 219 N.E.2d 18, 351 Mass. 718.

This section by stating that only way in which Commonwealth's credit may be pledged is by legislature action excludes later carrying out of pledge of credit from constitutional concept of pledge itself. Massachusetts Bay Transp. Authority v. Boston Safe Deposit & Trust Co. (1963) 205 N.E.2d 340, 345 Mass. 535.

Supreme Judicial Court would not speculate as to constitutional questions other than that specified, in question from Legislature, in reference for this section. Opinion of the Justices (1962) 180 N.E.2d 912, 347 Mass. 750.

Constitutional prohibition against lending credit of the Commonwealth to private enterprises was aimed at borrowing by the Commonwealth. Id.

There bill which related to payments to municipalities to aid them for [illegible] grants in case of [illegible] there was no [illegible] of credit of Commonwealth [illegible] constitutional [illegible] against lending credit of Commonwealth to private enterprises. Id.

Commonwealth may not expend public money to acquire property for sale or transfer to private individuals. In re Opinion of the Justices (1927) 159 N.E. 22, 261 Mass. 536.

Public money cannot be appropriated or public credit lent in aid of private objects or enterprises. In re Opinion of the Justices (1927) 159 N.E. 22, 261 Mass. 523.

Accelerated Highway Program Act grants discretionary authority to reimburse an owner for cost of an ordered necessary relocation of utility facilities, the such grant of authority is a constitutional exercise of legislative power. Op.Atty.Gen. May 3, 1963, p. 133.

Authority to reimburse public utility companies for cost of relocating utility facilities under federal highway program applies to situations where such facilities are located on private property by permit or license at sufferance. St. 1956, c. 719. Op.Atty.Gen. Aug. 1962, p. 80.

State Treasurer [illegible] borrow funds for purchase of [illegible] St.1923, c. 43 [illegible] borrow on notes [illegible] [illegible] indebtedness [illegible] [illegible] [illegible] [illegible] Op.Atty.Gen. [illegible]

2. Public purpose

Whether [illegible] of public money is for a public purpose is a question of judicial cognizance. Mayor of Boston [illegible] of N.E. [illegible] Mass. 225 [illegible] of the Justices

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THE COMMONWEALTH OF MASSACHUSETTS
BOARD OF REGENTS OF HIGHER EDUCATION
ROOM 511, McCORMACK BUILDING
ONE ASHBURTON PLACE
BOSTON, MASSACHUSETTS 02108

RECEIVED

March [illegible] 1982

RECEIVED
EXEC ASST TO PRES
MAR 12 1982
NO SHORE COMM COLLEGE

Mr. Edward T. Calnan
Executive Director
Department of Community Development
City Hall
Lynn, MA 01901

Dear Mr. Calnan:

Attached hereto is a set of letters transmitted from the Division of Capital Planning and Operations in response to your presentation on February 11, 1982.

The Division has decided that they cannot accept the proposal due to certain problems with law and cost.

I am sorry we cannot get together on this item, however, I hope there will be other opportunities where we can demonstrate our sincere desire to be a good neighbor and resident of Lynn.

Sincerely,

E. Edward Ross

E. Edward Ross
Associate Vice Chancellor
Facilities Development

EER:ap

Attachment

cc: President Traicoff
Vice Chancellor Finnegan

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EDWARD J. KING
GOVERNOR

STUART D. LESSER
DEPUTY COMMISSIONER

ALAN R. BURNE
DIRECTOR

The Commonwealth of Massachusetts

Executive Office for Administration and Finance
Division of Capital Planning and Operations
Office of Project Management
One Ashburton Place
Boston, Massachusetts 02108

March 5, 1982

Mass State Project EJ70-1 #2 and #3
North Shore Community College
Lynn Campus

Board of Regents of Higher Education
Room 619 Mc Cormack Building
One Ashburton Place
Boston, Ma · 02108

ATTENTION: Mr. Edward Rossi
Associates Vice Chancellor
Facility Management

Dear Sirs

A detailed review has been made of the proposal for land exchange at the college site in Lynn, presented by the city officials at the D.C.P.O. meeting of 2-11-82. This review consisted of an investigation into the legal aspects of such a transaction and an analysis of projectad costs due to various factors affecting design and construction. There appears to be a legal question involved in the land exchange which could violate the constitution of the Commonwealth of Massachusetts. The time to pursue this legal matter could and would cause a serious delay to the project.

The financial impact of the land exchange is clearly defined in the enclosed letter from the architect's office (Earl R. Flansburg and Associates Inc.) dated 2-18-82. This letter is self explanatory.

With these facts before us it is the decision of this office that the project proceed as planned and the proposal of the city officals be declined.

Very truly yours,

ALAN R. BURNE
DIRECTOR OF PROJECT MANAGEMENT

ARB/JW/db

cc: North Shore C. C., T. Neylon
Earl R. Flansburgh & Assoc. Inc.

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EARL R. FLANSBURGH AND ASSOCIATES, INC.

77 North Washington Street
Boston, Massachusetts 02114
Telephone 617.367.3970

18 February 1982

efa

Architecture
Interior Design
Space Planning
Landscape Architecture
Graphic Design
Urban Design
Planning

Earl R. Flansburgh FAIA
Todd Lee, AIA

Michael H. Bourque IBD
Peter S. Constable
Robert A. Fournier CSI
Roger W. Kallstrom ASLA
Russell C. Parmiter AIA
Santiago A. Rozas AIA
David S. Soreau AIA

Mr. John Walsh
Commonwealth of Massachusetts
Division of Capital Planning
and Operations
1 Ashburton Place
Boston, MA 02108

Re: North Shore Community College
Cost Impact of Proposed Change
in Site Configuration

Dear John:

As a result of last Thursday's meeting with representatives of the City of Lynn, we have analyzed what the cost impact would be on this project if the proposed exchange of land recommended by the City of Lynn were to take place.

In developing the cost of this land exchange we have made the following assumptions.

1. That we would continue working on the working drawings for the project in its present configuration until approximately the end of March.

2. The change in the boundary for the community college site would be basically as outlined by the City of Lynn.

3. The cost of inflation is approximately 1% per month or 12% per year. The inflation, of course, would only apply to that portion of work which is not now under construction contract. That means it would apply to $14,630,000 worth of work. Inflation at 1% would be approximately $145,000 per month.

4. We have further assumed that the amount of time it would take to redo the design development would be approximately three months. This is consistent with our experience on the project to date. It would take an additional two months to redo the working drawings which would have to be discarded as a result of the loss of work in February and March.

The total cost of the above items comes to $1,423,400 and would require a delay of seven months in the project. This may seem

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like a staggering figure, but $1,000,000 of the cost is for inflation alone. We believe a seven month delay is probably optimistic given the substantial hurdles that exist to accomplish this land exchange. We would like to also point out that some of the land that the City of Lynn is talking about exchanging they do not yet own and to our knowledge have not appropriated funds to buy.

We have very carefully examined the proposed land exchange to assess its impact on the North Shore Community College, Lynn Center Campus design. As a result of this examination, we believe it would be necessary to completely rework the Design Development phase rather than simply returning the building to its prefire design.

In the prefire design, the main entrance to the college on Broad Street was designed to relate with the adjacent Marshal's Wharf building. Directly opposite the Broad Street entrance was a second entrance to the college from the parking lot. This put the two main entrances to the building in the center of the building. Immediately after the fire we were directed by the DCPO to make adjustments in the design because the Marshal's Wharf building was no longer existing adjacent to our property. The changes in the design were relatively easy to accomplish because the space in the center of the building could be filled-in easily and additional area added at both ends to create an entrance to the parking lot and an entrance from Broad Street. In addition the building was also rotated approximately 20° to bring the Broad Street entrance closer to the street.

What would be required, however, if the City of Lynn land exchange were to take place would be a design that had an entrance from the north. It would both serve the parking lot and be the formal school entrance. There would also be an entrance from the west to Broad Street. There would be no need for entrance from the east. This would mean that the internal circulation of the school would be substantially changed from the designs that we have developed over the past year.

In preparing our cost estimates for this letter we have assumed that the reworking of the design/development phase would require the modification of approximately 1/4 of the building. We have allocated in our estimate $50,000 because of our familiarity with the program.

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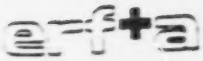

As your professional advisors on the Lynn Center project, we do not believe that the land exchange proposed by the City of Lynn is in the best interest of the North Shore Community College project. We do not believe that a $1,400,000 expenditure to change the boundaries of the piece of land are prudent use of the public funds. There is no question that we might have designed this building differently if the boundaries that are currently being proposed by the City of Lynn had been our original boundaries. They were not, however, our original boundaries.

We believe at some point all parties involved in the project have to decide that the objective of the planning of the Lynn Center Campus is not to engage in planning forever, but to produce a new college campus on the north shore.

If there are any questions concerning our calculations, we would be delighted to discuss the details with you.

Sincerely,

EARL R. FLANSBURGH AND ASSOCIATES, INC.

Earl R. Flansburgh, FAIA
President

Enclosure

cc: Terry Neylon
John Costello

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Working drawing loss = $100,800 month

Redesign Design Development $200,000
Credit for familiarity with Program $1,000
= $200,000

Inflation 1% x $14,600,000 = $146,000 month

	February	March	April	May	June	July	August
Working Drawing Loss	$100,800	$100,000					
Redesign			$66,600	$66,600	$66,600		
Inflation	$146,000	$146,000	$146,000	$146,000	$146,000	$146,000	$146,000
Sub Total	$246,800	$246,800	$212,600	$212,600	$212,600	$146,000	$146,000
Total	$1,423,400						

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APPENDIX 8

NOTICE TO VACATE (7/6/1982)

FRANCIS X. BELLOTTI
ATTORNEY GENERAL

THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF THE ATTORNEY GENERAL
JOHN W. MC CORMACK STATE OFFICE BUILDING
ONE ASHBURTON PLACE, BOSTON 02108

RECEIVED

July 6, 1982

Mr. Phillip J. & Mary L. McAuliffe
Hutchinson Medical
133 Lynway
Lynn, Massachusetts 01901

RE: NOTICE TO VACATE
PREMISES AT 133 LYNNWAY, LYNN, MASS.

Dear Mr. McAuliffe:

The title to the premises which you occupy at the address shown above was taken by the Commonwealth of Massachusetts on August 21, 1981. As you are aware, an injunction was issued by Essex Superior Court permitting you to remain on the premises for a period of ninety (90) days up to and including August 9, 1982. Please be advised that the premises must be vacated no later than August 10, 1982. This notice is to be treated as a formal notice to vacate.

Very truly yours,

Ernest P. [illegible]
Assistant Attorney General
Eminent Domain Division
(617) 727-2200

EPD:amc
cc: Kenneth C. Roy, Esq.
72 Broad Street
Lynn, MA 01902

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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PROGRAM ENROLLMENT PROJECTIONS (4/11/83)

NORTH SHORE COMMUNITY COLLEGE

M E M O R A N D U M

TO: Dean's Staff Members

FROM: David L. Adams

RE: Program Enrollment Projections - Second Draft, and
Career Faculty and Non-faculty Personnel Projections - Second Draft

DATE: April 11, 1983

Please critically preview the two attached second draft documents concerning program enrollment and personnel projections. The program enrollment projections are separated into Beverly and Lynn campuses and reflect input from all division chairpersons. Any additional comments should be forwarded to me by April 13th. The final program enrollment projection document, which will include input received between now and April 13th, will be published and distributed shortly thereafter.

The personnel document contains projections that have been made in both the career faculty and non-faculty areas. General education faculty staffing projections will be made next Wednesday (9 a.m., SR) at a meeting with the division chairpersons of the three liberal arts divisions. Following this meeting, a final personnel projections document will be delivered to the Facilities Planning Committee on April 15th. This same document will be distributed at the next Dean's Staff meeting on April 20th so that it can be reviewed and commented upon in its entirety. Thank you very much for your continuing input and cooperation in these long range planning activities.

DLA:dob

Attachments

cc: Terry Neylon
Peter Martel

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OFFICE OF DEAN OF ACADEMIC AFFAIRS

- ALL NUMBERS REFER TO TOTAL HEAD COUNT -

NORTH SHORE COMMUNITY COLLEGE
PROGRAM ENROLLMENT PROJECTIONS
BEVERLY CAMPUS

	FY 83	84	85	86	87	88	Comments
TRANSFER							
Liberal Arts	105	90	90	90	115	125	
Liberal Arts - General Studies	400	380	360	360	400	430	
Liberal Arts - Bus. Administration	125	125	125	125	150	170	
Engineering Science	30	45	45	45	60	60	
*Computer Science Transfer	--	--	20	30	35	35	
General Studies - Pre-Engineering	40	40	40	40	50	50	
General Studies - Pre-Chiropractic	--	20	30	30	35	35	
Liberal Arts - Interdisciplinary Studies	7	20	30	30	35	35	
Subtotal	707	720	740	750	880	940	
CAREER							
Allied Health							
Nurse Education	138	150	150	150	160	170	
Radiologic Technology	32	32	32	32	35	37	
Occupational Therapy Assistant	40	40	40	40	42	44	
Physical Therapist Assistant	36	36	36	36	40	42	
Respiratory Therapy	33	33	33	33	43	53	
Subtotal	279	291	291	291	320	346	
Business Sciences							
Business Computer Programming	191	181	171	151	125	100	
Business Career	259	260	260	260	270	275	
Executive Secretary	54	54	54	54	54	74	
Legal Secretary	33	40	40	40	40	40	
Medical Secretary	40	40	40	40	40	40	
Office Information Processing	25	30	35	35	40	40	
Office Assistant Certificate	12	20	20	20	20	20	
Word Processing Assistant	0	20	25	25	30	30	
Medical Transcriptionist	0	--	20	20	20	20	
Subtotal	618	645	665	645	649	639	

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April 1, 1983

OFFICE OF DEAN OF ACADEMIC AFFAIRS

	83	84	85	86	87	88	Comments
Human Services							
Alcohol Counseling (Certificate)	--	--	--	--	10	20	
Gerontology Certificate	--	--	--	--	15	30	
Early Childhood Education	54	54	54	54	54	58	
Paralegal	14	25	30	35	35	35	
Law Enforcement	54	54	54	54	54	55	
Recreation Certificate	--	--	10	20	22	22	
Mental Health	35	35	35	35	35	40	
Subtotal	157	168	183	198	225	260	
Industrial Technologies							
Aviation Science	34	34	34	34	36	40	
Electro-Mechanical Technology	125	125	125	125	125	125	
Fire Safety & Technology	28	28	28	28	30	30	
Manufacturing Engin. Technology (inc. options)	--	--	--	--	20	35	
*Drafting Technology (CAD)	--	--	--	--	20	35	
*Electronic Media Prod. Tech.	--	--	--	--	--	20	
*Computer Operator Certificate	--	--	10	20	20	20	
Electronic Technician Cert.	30	30	30	30	30	30	
Technical Writing (Degree and Certificate)	5	15	20	25	25	30	
Subtotal	222	232	247	262	306	365	
GENERAL EDUCATION							
Motivation	54	54	54	54	60	60	
Subtotal							
Not Matriculated (Part-time)	200	225	250	250	350	430	
TOTAL	2237	2335	2430	2450	2790	3040	

*Proposed New Programs

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April 1, 1983

OFFICE OF DEAN OF ACADEMIC AFFAIRS

190

NORTH SHORE COMMUNITY COLLEGE
PROGRAM ENROLLMENT PROJECTIONS
LYNN CAMPUS,

	FY 83	84	85	86	87	88	Comments
TRANSFER							
Liberal Arts	25	30	35	40	45	45	
Liberal Arts - General Studies	75	90	110	130	140	150	
Liberal Arts - Bus. Administration	50	60	60	75	90	100	
Engineering Science	--	--	25	25	30	30	
Pre-Engineering	--	--	15	15	25	25	
Subtotal	150	180	245	285	330	350	
CAREER							
_____							
Subtotal	--	--	--	--	--	--	
Business Sciences							
Business Computer Programming	--	25	30	40	50	50	
Business Career	100	125	140	150	150	150	
Executive Secretary	30	30	40	50	60	60	
Medical Secretary	--	--	--	15	20	20	
Office Information Processing	--	24	24	30	30	30	
Office Assistant Certificate	--	12	12	15	15	15	
Word Processing Asst. Certificate	--	12	12	15	15	15	
Medical Transcriptionist	--	12	12	15	15	15	
Subtotal	130	240	270	330	355	355	

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April 1, 1983

OFFICE OF DEAN OF ACADEMIC AFFAIRS

Program Enrollment Statistice - Lynn Campus - Continued

	FY 83	84	85	86	87	88	Comments
Human Services							
Drug & Alcohol Rehab./Counseling	42	42	42	45	48	50	
Gerontology Certificate	20	20	30	40	40	40	
*Mental Retardation Certificate	--	--	10	20	20	20	
Recreational Certificate	--	--	20	20	20	20	
Corrections	*24	30	30	30	35	35	
Early Childhood Education	--	--	--	10	25	25	
Subtotal	86	92	132	165	188	190	
Industrial Technologies							
Electro-Mechanical Technology	--	--	--	20	45	50	
Manufacturing-Engineering Tech (inc. options) /	--	--	--	20	30	35	
Drafting Technology	--	--	--	20	30	35	
*Energy Systems Technology	--	--	--	--	20	35	
Electronic Technician Cert.	--	--	--	20	30	30	
Subtotal	--	--	--	88	155	185	
GENERAL EDUCATION							
Motivation	--	--	--	20	30	30	
Subtotal							
Not Matriculated (Part-time)	234	240	250	225	225	200	
TOTAL	600	752	897	1113	1283	1310	

*Proposed New Programs

**Not included in 602 count

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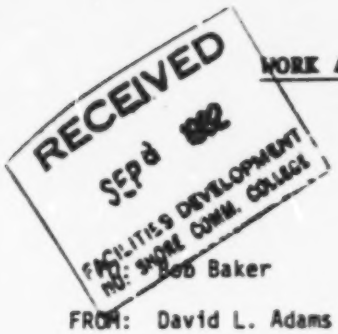
APPENDIX 10



WORK ASSIGNMENT FOR RON TAGNEY (9/8/82)

NORTH SHORE COMMUNITY COLLEGE

MEMORANDUM

COPY

TO: Bob Baker

FROM: David L. Adams

RE: Work Assignments for Ron Tagney - Fall, 1982 Semester

DATE: September 8, 1982

The following assignments will be given to Ron Tagney as part of his half-time release to work under my direction in facilities development for the Fall, 1982 semester.

1. Update the Beverly Norwood Pond Educational Specifications document dated May, 1981. This update reflects both the new space allocations development during the Summer, 1982 (dated June 3, 1982) and other alterations in the program since it was first printed in May, 1981. To be completed by November 1, 1982.

2. Coordinate a meeting of the academic leadership on the status of the Lynn Campus project which will: (a) emphasize the importance of their earlier input; and (b) initiate the collection of furniture/equipment needs. This meeting will be similar to the February, 1982 meeting which was also coordinated by Ron. Meeting to be scheduled and planned for October 15, 1982. Hopefully the actual meeting will be held sometime before November 20, 1982.

3. Coordinate the collection and analysis of the furniture and equipment (F & E) list for the academic component for the Lynn Campus. The exact nature of the material to be collected and analyzed will be determined by Ron through discussions with myself and Terry Neylon. To be completed by January 1, 1983.

It is my estimation that these three assignments will be at least a 20-hour a week job for Ron throughout the entire Fall, 1982 semester. I would be happy to discuss any of these projects with you in more detail at your convenience.

DLA:dob

cc: Paul Frydrych
Terry Neylon
Ron Tagney

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APPENDIX 11

GLOSSARY OF PHYSICAL SPACE TERMS

To assist the reader and eliminate the confusion often associated with the use of acronyms the following list of definitions is reprinted as they appear in the **Facilities Planning Guide For the Community College System**, Massachusetts Advisory Council on Education (1969, pp. 11-12)

Assignable Square Feet (ASF)

The net area of a building assigned to student, faculty, or staff for instruction, operation, or administration purposes. This area is computed by inside measurement from finished surface to finished surface. Included are space subdivisions for classrooms, laboratories, offices, seminar and conference rooms, libraries, and specifically related support service spaces. Also included are special purpose spaces such as auditoriums, student activity areas, and physical education areas.

General Service and Circulation (GSC)

All building space not included in the above.

1. **General Service**

   Structure: This include walls, furred space, partitions, columns, unusable areas for attics or basements. This is the residual area remaining after deduction of the ASF, circulation, custodial, toilet and mechanical areas.

   Custodial: This includes areas used for building protection, maintenance, and operation. Included are areas such as janitor closets and locker rooms, maintenance and storage rooms.

   Mechanical: This includes all areas necessary for mechanical equipment, and utility services. Included are such areas as air-duct shaft, boiler rooms, mechanical service shafts and tunnels, meter and communications rooms, telephone booths, temperature control, mechanical and fan rooms.

2. **Circulation**

Interior This includes corridors, lobby, foyer spaces, display areas, stairwells, stairways, elevator shafts, including dumbwaiters, pedestrian tunnels and bridges. This area is measured in full area.

Exterior This includes roof, overhang over unenclosed paved space, open connecting corridors area, receiving and loading platforms. This space is measured as one-half full area.

Outside Gross Square Feet (OGSF) The sum of assignable square feet (A.S.F.) and the general service and circulation (G.S.C.) areas establishes the total Outside Gross Square Feet (O.G.S.F.) required for the campus.

STANDARDIZED FORMS FOR SPACE DESCRIPTIONS AND ADJACENCIES

SPACE REQUIREMENTS FORMAT

For the purposes of this format, the following hierarchy of activity groups is used:

Element: A major activity group, such as a Division, Student Services, etc.

Sub-Element: A smaller activity group, such as a Department, Course Area, Library, etc.

Spaces: Are listed within each sub-element.

The format consists of three types of sheets:

1. Element Description Sheet names the element and lists its sub-elements. The latter are listed vertically and horizontally and an adjacency matrix is developed, using the key on the sheet. Space is available, to the right, for other elements or sub-elements, and their adjacency numbers. General notes on the Element are given at the bottom of the sheet.

   The adjacency key codes 1, 2, 3, S are defined for the purposes of the attached educational specifications as follows:

   (a) 1 - Immediate - the two spaces are physically adjoining. Exit from one space leads directly into the other.

   (b) 2 - Convenient - the two spaces are on the same floor, [illegible] rooms away, either down the hall or across the hall or open area.

   (c) 3 - Indirect - the two spaces are more than [illegible] rooms away; on another wing or floor or across and down several intervening corridors.

   (d) S - Shared - the two spaces are located in the identical physical space.

2. The Sub-Element Description Sheet similarly lists all the spaces within the sub-element, and an adjacency matrix is developed. Each type of space is noted, and the number of similar spaces of that type are listed for each Phase.

   Requirements and characteristics of each space are noted at the extreme right:

   (a) Service Adjacency - this designates the proximity of the space to the main delivery area or loading dock at the campus.

   (b) Parking Adjacency - this designates the proximity of the space to outside parking availability.

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ELEMENT DESCRIPTION PAGE

ELEMENT

ADJACENCIES

Other Elements

ADJACENCY KEY

1. Immediate
2. Convenient
3. Indirect
4. Shared

SUB-ELEMENT OR DEPT.

Dean of Academic Affairs

Center for Alternative Studies

Comm. Base Learning Ctr.

Instr. Development Office

Dean of Academic Affairs

Center for Alternative Studies

Community Based Learning Office

Instructional Develop. Office

EXPANSION NOTES:

FLEXIBILITY NOTES:

OTHER:

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SUB-ELEMENT ... SPACE REQUIREMENTS
PAGE

ELEMENT: ACADEMIC SERVICES

SUB-ELEMENT: Dean of Academic Affairs

ADJACENCY KEY
1. Immediate
2. Convenient
3. Indirect
S. Shared

Number of Occupants	Assignable Square Footage	Phase I - No. of Stn. Shared	Phase II - No. Plans at Present	SPACE	ADJACENCIES: Admin. Support; Reception Area; Photocopy/Duplication; Division Chairs; Conference Room; Storage Room; Faculty Lounge Areas; Staff Assistant; Faculty Offices	REQUIREMENTS: Public Access; Service Adjacency; Parking Adjacency; Outside Access; Expansion Adjacency; Divisible; Community Use; Natural Light (M.P.I.); Equipment Mobility; Noise Generation; Special Acoustics
1	150	1		Admin. Support	1 2 2 2 2 3 3 3 3 2	P P X X
2-3	500	1		Reception Area	2 2 2 2 3 3 3 3 2	N N X X
-	400	1		Photocopy/Duplication	2 2 2 3 3 3 3 2	
1	450	3		Division Chairs	3 3 3 3 2	X
0 15	250	1		Conference Room	3 3 3 2	N
-	200	1		Storage Room	3 3 2	
30	600	2		Faculty Lounge Areas	3 2	P X
1	125	1		Staff Assistant	3 2	P X
					2	

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Element: Academic Services
Sub Element: Dean of Academic Affair

INDIVIDUAL SPACE DESCRIPTIONS

Space	Admin. Support	Reception Area	Photocopy/Duplication
Users	Assistant Dean of Faculty/Staff	Secretary/Staff/Visitors	Academic Staff/Secretary
Activities	Academic Affairs business	Clerical work, reception of college visitors, faculty & staff.	Duplication of materials for faculty and staff.
Equipment & Furniture (General)	Desk with chair, 3 arm chairs, dictaphone, bookshelves, file cabinets and table.	Secretary desk and typewriters, dictaphone, book shelves, several 4 drawer file cabinets, magazine table with several chairs.	Spirit duplicator, photocopy machine, metal cabinet for supply storage, open grey shelving.
Special HVAC Plumbing & Electrical (General)	N/A	N/A	Must be ventilated due to use of toxic solvents.
Notes:	Carpeted, Window, Telephone	Carpet preferred, Telephone	Ventilation to outside essential toxic vapors generated in duplication.

Space	Division Chairs	Conference Room	Storage Room
Users	Division Chairman/Staff	Staff/Professionals/Community	Staff/Professional
Activities	Academic division business	Staff meeting, advisory board meetings, community group meetings.	Storage of administrative supplies and records.
Equipment & Furniture (General)	Desk with chair, 3 arm chairs, bookshelf, file cabinet.	Blackboard, Audio Visual potential, 6x12 oval table with chairs.	Shelving around walls, safe with combination lock
Special HVAC Plumbing & Electrical (General)			
Notes:	Carpeted, Telephone, Window		

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Element: Academic Services
Sub Element: Dean of Academic Affairs

INDIVIDUAL SPACE DESCRIPTIONS

Space		Faculty Lounge Area	Staff Assistant
Users		Faculty	Assistant, Staff, Visitors
Activities			College Business
Equipment & Furniture (General)		Lounge chairs and couches, round tables and chairs, mail boxes, cork boards.	desk and chair, 3 arm chairs, file cabinets, bookshelves, work table
Special HVAC Plumbing & Electrical (General)		.....	N/A
Notes:		Locate convenient to faculty offices.	N/A

Space			
Users			
Activities			
Equipment & Furniture (General)			
Special HVAC Plumbing & Electrical (General)			
Notes:			

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APPENDIX 13

ACADEMIC INFORMATION MEETING (2/25/82)

LYNN CAMPUS CONSTRUCTION PROJECT

MEETING

WHO: PROGRAM DIRECTORS, DEPARTMENT CHAIRMEN, DIVISION CHAIRMEN
WHEN: FEBRUARY 25, 1982, THURSDAY
WHERE: SCHIER ROAD 310
TIME: 12:45 P.M. - 2:00 P.M.

AGENDA

1. INTRODUCTORY REMARKS - DEAN FRYDRYCH
2. EXTERNAL PROJECT OVERVIEW - TERRANCE NEYLON
3. LYNN CAMPUS BUILDING DESIGN
   CONSTRUCTION/SITE - TERRANCE NEYLON
   ACADEMIC CONSIDERATIONS - DAVID ADAMS
4. DISTRIBUTION & EXPLANATION OF PACKETS - RONALD TAGNEY
5. ILLUSTRATION OF EXAMPLE SPACE ANALYSIS SUBMISSION - DAVID ADAMS
6. QUESTIONS AND ANSWERS
7. CONCLUDING REMARKS - RONALD TAGNEY

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William Goding, Division Chairperson
Allied Health

Sophie Fowler, Director
Occupational Therapy Assistant

Shirley Needham, Director
Physical Therapist Assistant

Romayne Sousa, Director
Radiologic Technology

Dorothea Alexander, Division Chairperson
Business Sciences

John Sullivan, Chairperson
Business Department

Jennifer Rich, Chairperson
Secretarial Department

Peter Williams, Coordinator
Aviation Science Department

Philip Sbaratta, Division Chairperson
English and Communications

Terri Whitney, Chairperson
English Department

Minnette Lall, Chairperson
Special Services Department

Peter Foss, Chairperson
Media & Communications Department

Anita Kaplan, Coordinator
Academic Skills Center

Robert Baker, Division Chairperson
Humanities & Social Sciences

Walter Mott, Chairperson
Behavioral Science Department

Edna Chansky, Chairperson
Cultural Arts Department

Nahum Sherf, Chairperson
History/Government/Economics Department

Larry Myers, Chairperson
Interdisciplinary Studies Department

Thomas Wisbey, Division Chairperson
Human Services

Jan McLanahan, Coordinator
Early Childhood Education

Katie Herzog, Coordinator
Mental Health

Tom Noone, Coordinator
Law Enforcement

Glenn DuBois, Coordinator
Corrections Program

Tom MacLachlan, Coordinator
Gerontology Program

Paulette Massari, Coordinator
Drug & Alcohol Rehabilitation

Margaret Harris, Division Chairperson
Nurse Education

Bertram Blumenkrantz, Division Chairperson
Science & Mathematics

George Vagenas, Chairperson
Natural Sciences Department

Frank Ryan, Chairperson
Fire Protection & Safety Technology

Ben Merry, Chairperson
Industrial Technology Department

Dr. Neil Shea, Chairperson
Mathematics/Physics Department

Anita Turner, Director
Center for Alternative Studies

Joe Boyd, Staff Assistant
Center for Alternative Studies

Kathe German
Assistant Dean of Academic Affairs

Paul Frydrych
Dean of Academic Affairs

John Gaboury, Director
Learning Resource Center

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Lou Procopio, Director
Audio-Visual Services

Terrance Neylon, Director
Facilities Planning and Management

Ronald Tagney, Professor
History/Government/Economics Department

George Traicoff, President

David Newhall, Coordinator
Business Computer Science

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Meeting Notes

APPENDIX 14

erf+a

date:

DESIGNER MEETING NOTES (4/16/81)

project:

NSCC/Lynn Center

project no:

prepared by:

present

BBC: E. McAdam, M. Daniels
NSCC: T. Neylon
ERF+A: R. Palmiter, R. Kallstrom, M. Chiang

distribution

1. SCHEMATIC DESIGN

1.1 Schematic Design site plan, floor plans, elevations and building sections dated 4/16/81 were submitted for approval.

1.2 T. Neylon had reviewed plans previously and generally approved of current configuration.

1.3 ERF+A will investigate alternate materials for curved wall.

1.4 ERF+A submitted revised program summary and draft construction cost estimate dated 4/16/81.

1.4.1 Total site development costs were reviewed. McAdam stated that site costs as presented were low and should be raised to approximately $4.5 M.

1.4.2 Building construction cost of $[illegible] per S.F. is low. Recent BBC projects of comparable scope are in the range of $95. per S.F.

1.4.3 Increased construction costs and additional site acquisition and site development costs will exceed $23 M appropriation. T. Neylon will review with E. Rossi.

1.4.4 ERF+A will prepare revised construction cost estimate for meeting on 4/23/81. Les Buckingham was approved as cost consultant for project.

2. SITE ACQUISITIONS

2.1 T. Neylon met with DPW and reported that appraisal review of original 15 parcels will be completed by 30 April, remaining 15 parcels by 30 May.

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meeting notes

APPENDIX 15

erf+a

DESIGNER MEETING NOTES (6/19/81)

project:

NSCC/Lynn Center

date:
19 June 1981

project no:
Mass: EJ70-102
ERF+A: 7910.04

prepared by:
Santiago Rozas

present

BBC: M. Daniels, J. Welsh
NSCC: T. Neylon
ERF+A: E. Flansburgh, S. Rozas, S. Spirito

distribution

1. T. N. advised that the Board of Regents will vote on the land acquistion today (afternoon).

2. T. N. handed out new survey including 29 parcels (parcel #30 excluded), which will not be part in the land acquisition.

3. ERF+A to write letter, for record, explaining the pros and cons of proceeding under 2 separate contracts (early site & demolition).

4. T. N. required maintenance closets @ each floor with janitor sink, size 8 x 10 to 10 x 10.

5. 3 Schemes presented by ERF+A, T. N. to take "home" and make comments and recommendations by Monday or Tuesday. All three schemes have square footage very close to target.

6. The following meetings @ BBC were scheduled:

   June 25th @ 10:30 a.m.
   July 9th @ 10:00 a.m.

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APPENDIX 16

DEPARTMENT OF PUBLIC WORKS APPRAISAL REVIEW (6/1/1981)

The Commonwealth of Massachusetts

Executive Office of Transportation and Construction

Department of Public Works

100 Nashua Street, Boston 02114

June 1, 1981

Mr. Terrence B. Keylon, Director of
Facilities Planning and Management
3 Essex St.
Beverly, Mass. 01915
c/o President's Office

Re: Appraisal Review - Lynn
Community College Site Campus
Broad and Washington Streets and
Lynnway, Lynn, Massachusetts

Dear Mr. Keylon:

As requested by your board, the following properties appraised by Mr. Robert Noone and Mr. Paul Niscella were reviewed by this Department and the Real Estate Review Board.

The Real Estate Review Board has determined that the Fair Market Value of the following properties as of May 21, 1981 are

Parcel 17 & 18
City of Lynn
$500.00 (Five Hundred Dollars)
Rental Assigned - None

Parcel 21, 22 and 23
City of Lynn
$130,000.00 (One hundred thirty thousand dollars)
Rental assigned - none

Parcel 24
Cecelia L. DeRoberts
$30,000.00 (Thirty thousand dollars)
Rental assigned - none

Parcel 25
Brooks Furniture Co., Inc.
$187,000.00 (One hundred eighty seven thousand dollars)
Rental assigned $2000.00 per month

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Mr. Terrence B. Neylon, Director of Faculties Planning and Management

June 1, 1981

Parcel 19 & 20
Cele Realty Trust
$325,000.00 (Three hundred twenty five thousand dollars)
Rental assigned
Essex Electrical Supply - $[illegible] per month
Danvers National Bank - $[illegible] per month [illegible]

Parcel 11
Bessie Zigelbaum, Trustees
Zigelbaum Trust
$85,000.00 (Eight, five thousand dollars)
Rental assigned
Hood Realty Trust - $[illegible] monthly

Parcel 16
Lloyd D. Tarlin, Trustees, etal
Hood Realty Trust
$19,500.00 (Nineteen thousand five hundred dollars)
Rental assigned - $[illegible] monthly

Parcel 2, 3, 6 & 7
Lloyd D. Tarlin, etal Trustees of (Hood Realty Trust)
*$950,000.00 (Nine hundred and fifty thousand dollars)
*Less that amount received for fire damages
Rental assigned if property is rentable
Mr. Sontz (Former supermarket) $1000.00 per month
First East Savings Bank $[illegible] per month
Mr. LaFalce (Barber Shop) $225.00 per month
Mr. Case (Laundromat) $[illegible] per month
Shawmut Merchants Bank $1,250.00 per month
Mr. John Walton (land only) $[illegible] per month

Parcel 4 & 5
Harvey A. Brand, etal
$98,500 (Ninety Eight thousand five hundred dollars)
Rental assigned - $[illegible] per month

Parcel 26
Jacob Musinsky
$151,000.00 (One hundred fifty one thousand dollars)
Rental assigned $1600.00 per month

Parcel 27, 28 and 29
Elm Shank & Heel Company, Inc.
$155,000.00 (One hundred fifty five thousand dollars)
Rental assigned $1600.00 per month

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Mr. Terrence B. Weylon, Director of
Faculties Planning and Management June 1, 1981

The above listed rentals were determined by the Department of Review Appraisal Section.

Very truly yours,

Joseph A. Tuite, Director
Right of Way Bureau

PCB/GJB/JRD/dr

cc: EHS

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APPENDIX 17

EDWARD J. KING
GOVERNOR

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE DEPARTMENT
STATE HOUSE • BOSTON 02133

LAND TAKING LYNN (8/25/81)

August 25, 1981

Clover Cutting Die Company, Inc.
821 Washington Street
Lynn, Massachusetts 01901

Re: Property Located at 821 Washington Street, Lynn, MA

Dear Sir:

Notice is hereby given that by an Order of Taking dated August 17, 1981, the premises you own at the address shown above was taken by eminent domain pursuant to the applicable provisions of Massachusetts General Laws Chapter 79, Section 2. The taking authority is the Commonwealth of Massachusetts acting pursuant to said Massachusetts General Laws Chapter 79, Section 2. The purposes for which your property has been taken are the development and construction of a new campus center facility for North Shore Community College.

For damages to the parcel(s) of land numbered nine (9) on the plan described in said Order (a copy of which is enclosed herewith), the Commonwealth of Massachusetts has awarded the sum of $95,000.00, subject to proof of Title.

In accordance with the applicable provisions of Massachusetts General Laws Chapter 79, the right to damages vested on August 21, 1981, on which date said Order of Taking was recorded in the Essex South District Registry of Deeds.

The above described parcel(s) was/were taken in fee. Items attached to the real property are deemed to be fixtures, part of the real property taken, and are covered by the award set forth above.

Owners and/or occupants and/or persons in possession are hereby given one hundred twenty (120) days from the date of this notice to vacate the premises taken and to remove their personal property from the land so taken as provided by Massachusetts General Laws Chapter 79, Section 8B.

Massachusetts General Laws Chapter 79, Section 8A provides, in pertinent part, that a person entitled to damages may request an offer either in full settlement or as a payment pro tanto at any time after the right to damages has vested. Said Chapter 79, Section 8A also provides that the taking authority may at any time after the right to damages has vested offer in writing to every person entitled to damages on account of such taking a reasonable amount which the taking authority is willing to pay in either settlement or as a payment pro tanto.

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Pursuant to Massachusetts General Laws Chapter 79, Section 7B, 7C and 8A, a check for the payment of said damages awarded will be tendered to you at the following place and time:

Place: Driscoll and Gillespie
Attorneys at Law
895 Western Avenue
Lynn, Massachusetts

Date: October 16, 1981

Time: 9 A.M. to 5 P.M.

Such payment may be accepted and collected forthwith without prejudice to or waiver or surrender of any right to claim a larger sum by proceeding before an appropriate tribunal. But, if such pro tanto payment proves to be in excess of the damages subsequently assessed by such tribunal, you will be subject to the obligation to refund an amount equal to the difference between such pro tanto payment and damages subsequently assessed.

If the check for the damages awarded remains unclaimed for a period of sixty (60) days after the date of this notice, such check shall be withdrawn and a new check issued in like amount made payable to the Treasurer of the Commonwealth as provided for under Massachusetts General Laws Chapter 79, Section 7E.

Section 14 and 16 of said Chapter 79 state that a person whose property has been taken may petition for the assessment of damages to the Superior Court for the County in which the property was situated within two (2) years after the right to damages has vested.

As a former owner and occupant of the property, you will be entitled to reimbursement for eligible moving expenses and/or direct losses of property. The amount of the price offering and the appraisals and determination or just compensation do not reflect any consideration of or allowance for any relocation assistance and payments which an owner is entitled to receive under Title II of the Uniform Relocation Assistance and Real Property Acquistion Policies Act of 1970 or for the Authority's agreement to pay certain settlement costs. The Authority is ready to assist you in complying with regulations governing business relocation payments to ensure that you receive the maximum amount allowable by law and to provide you with information covering relocation advisory assistance, services and payments for which you may be eligible.

Sincerely,

William Highgas, Jr.

William Highgas, Jr.
Chief Legal Counsel

WH,Jr/rmk
Enclosure

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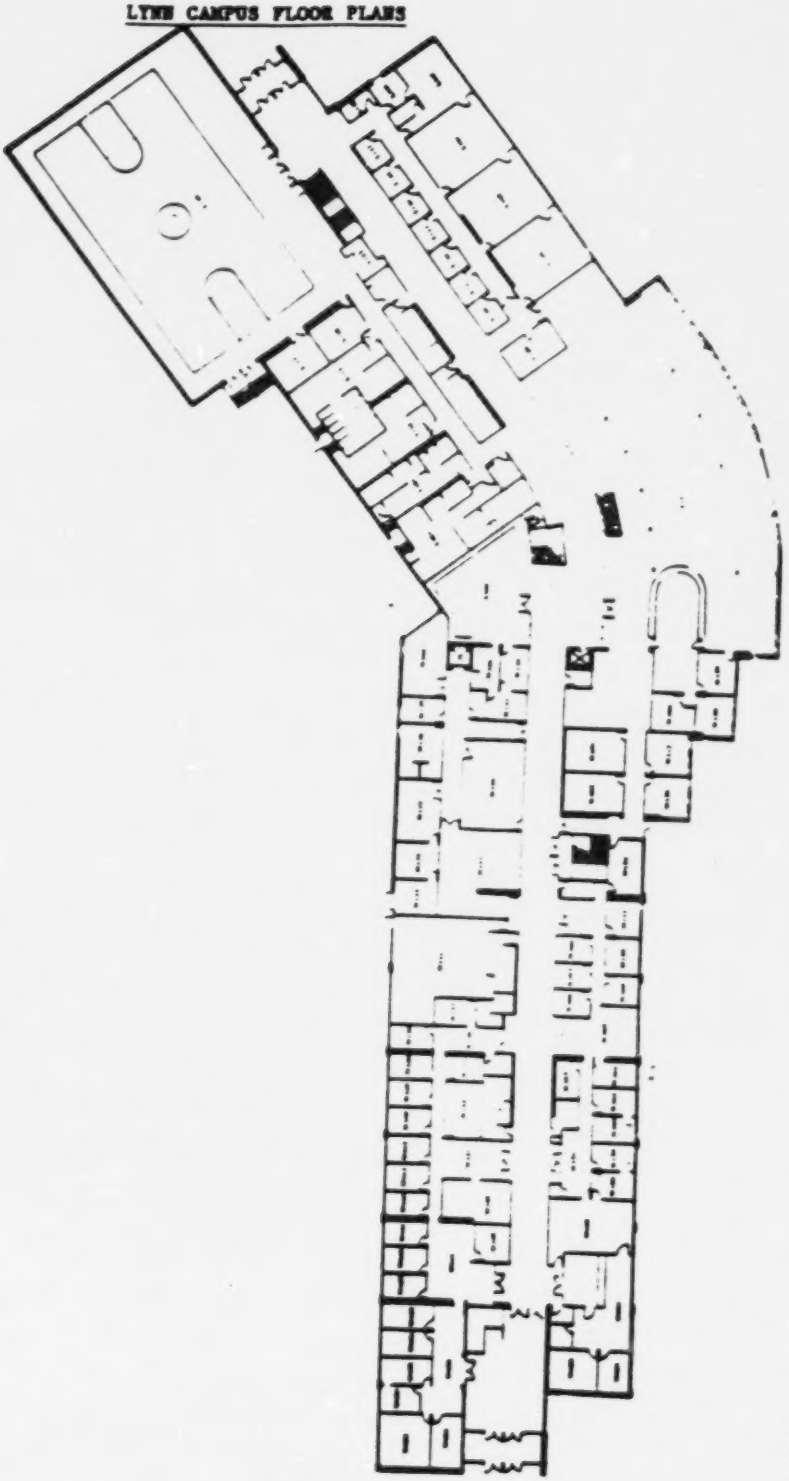
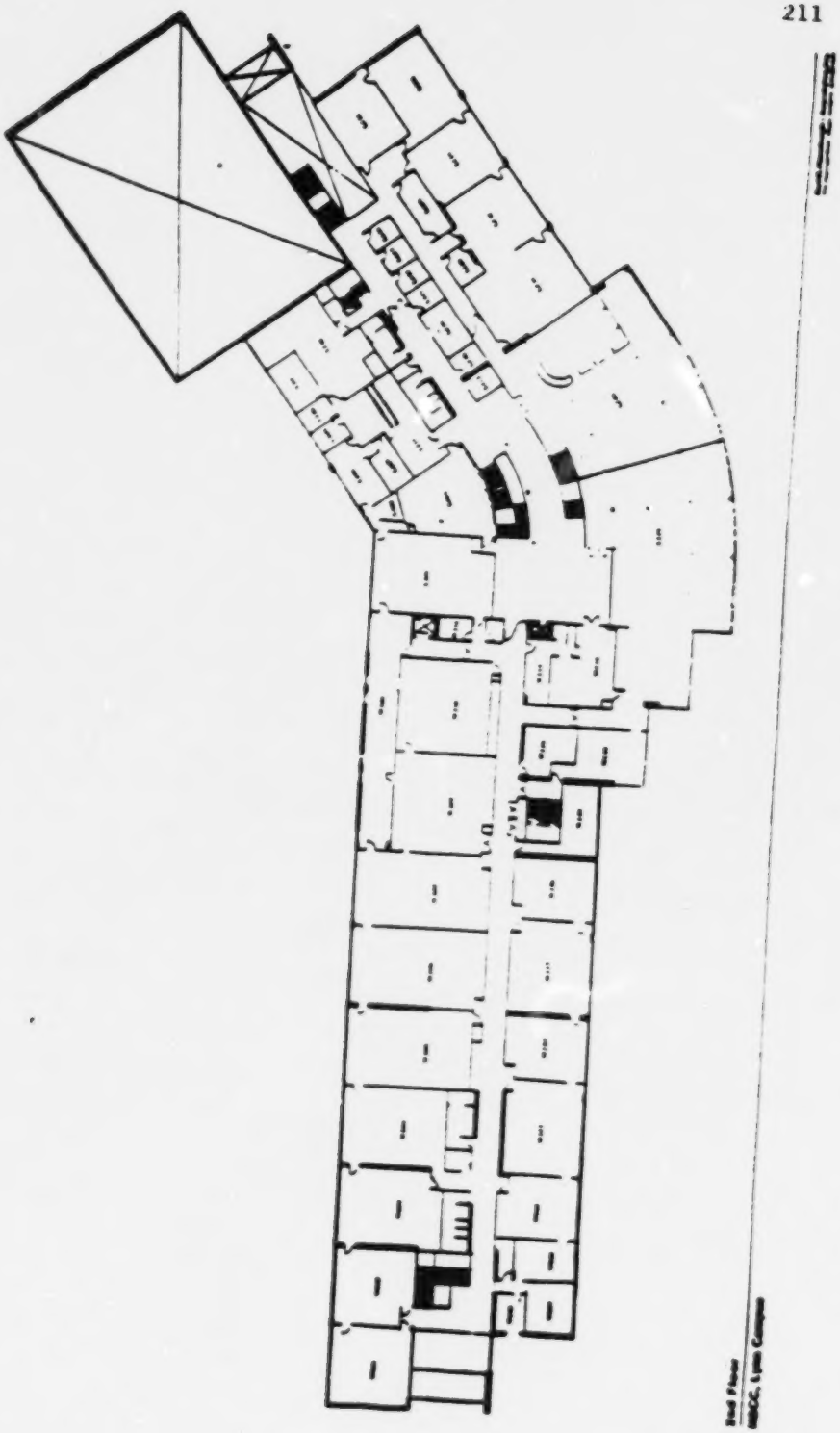
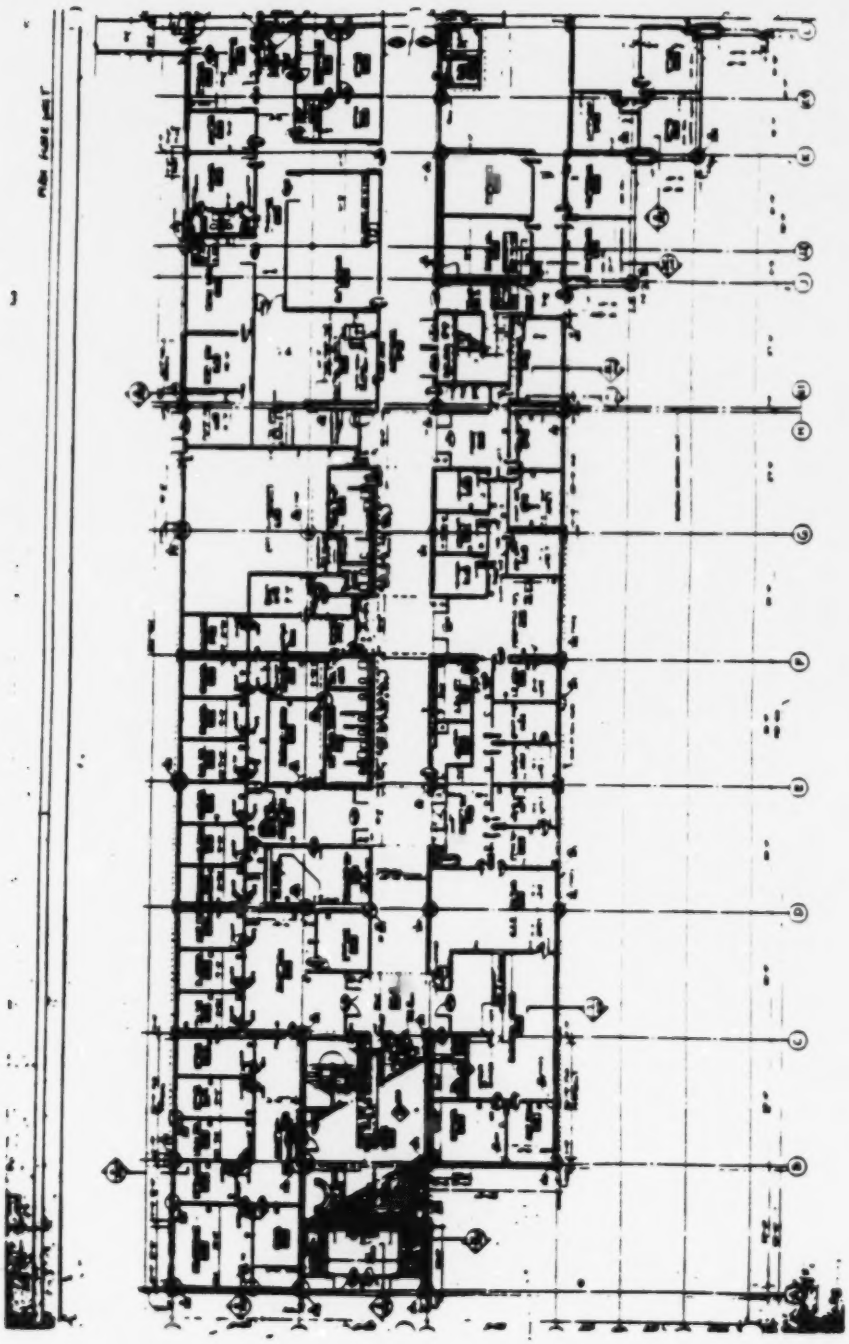
LYNN CAMPUS FLOOR PLANS







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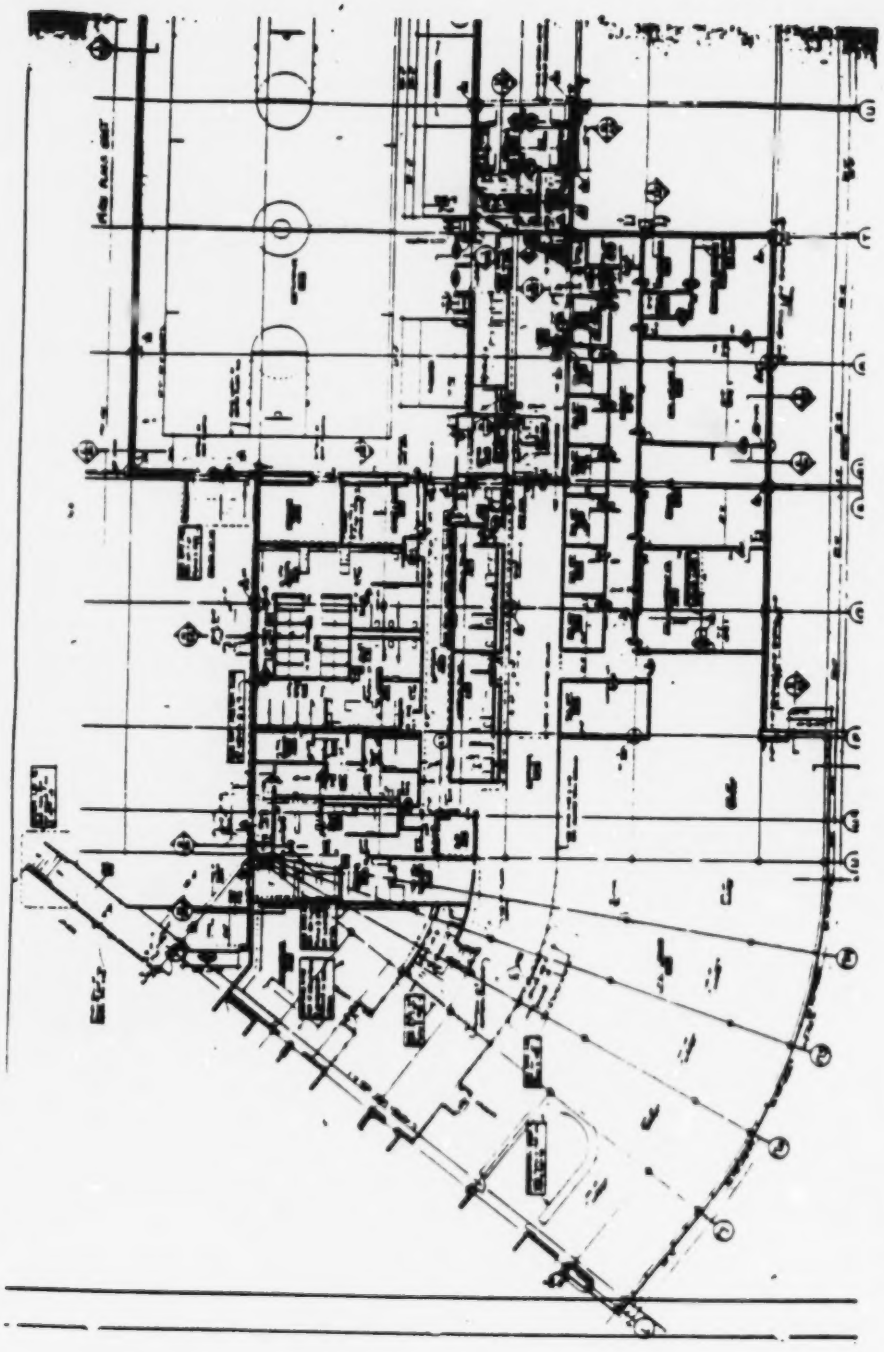

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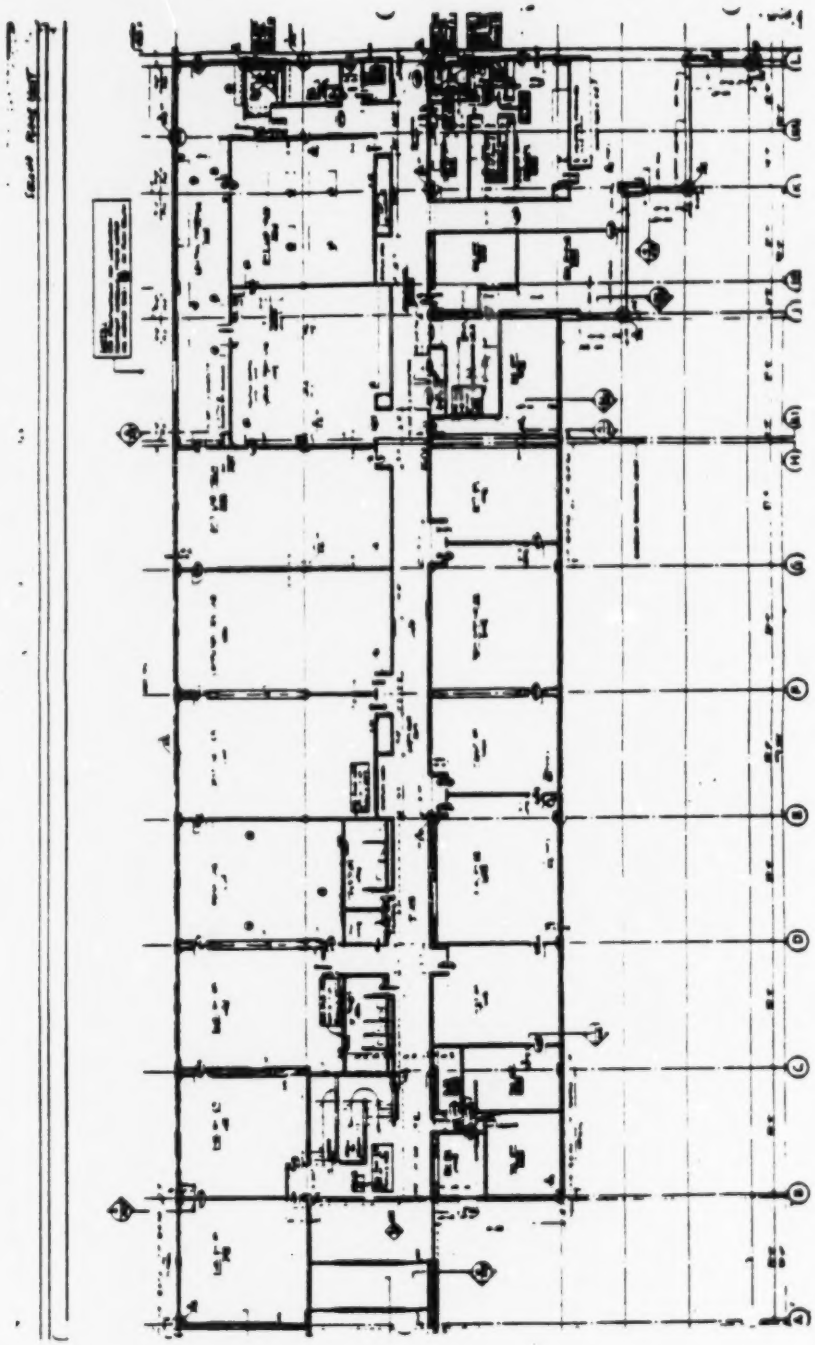

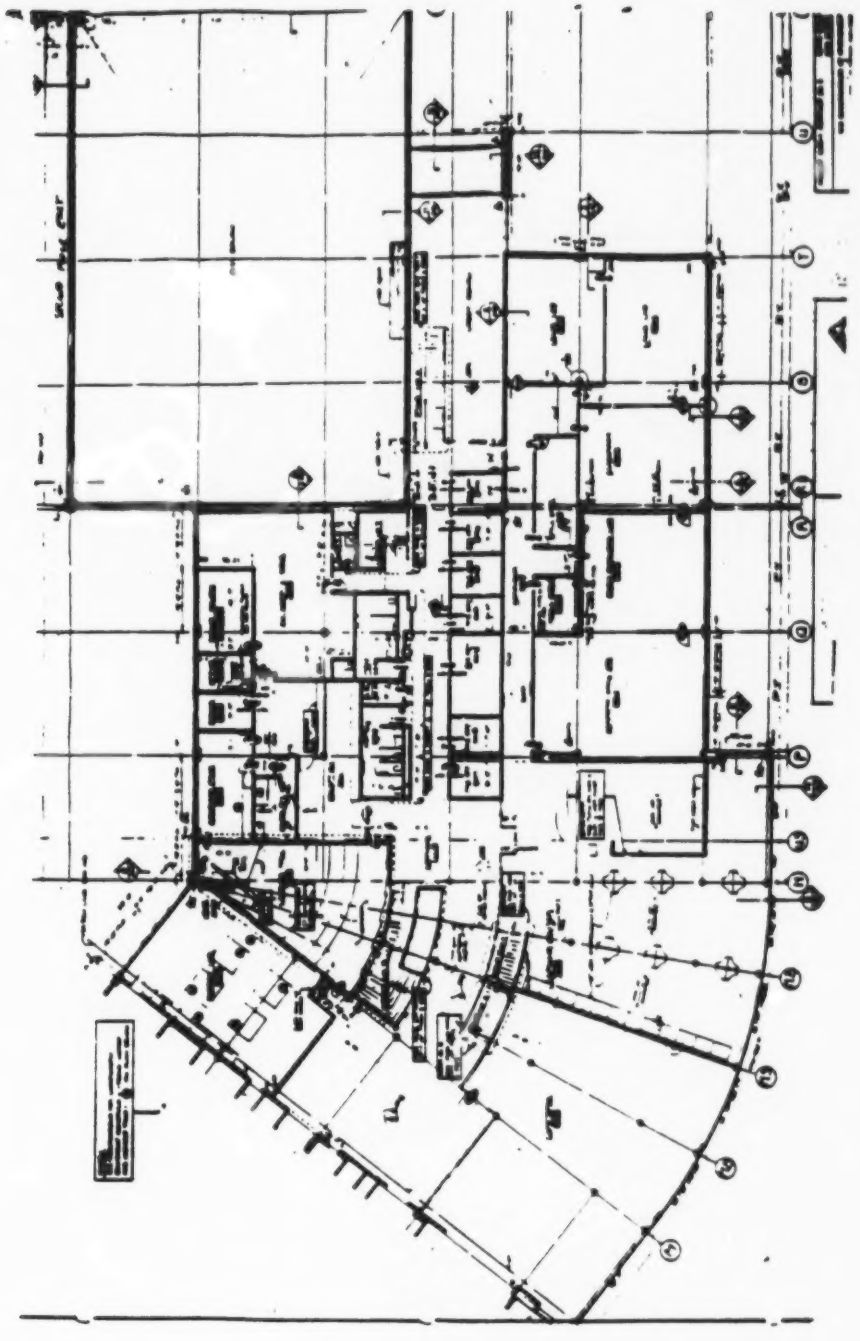

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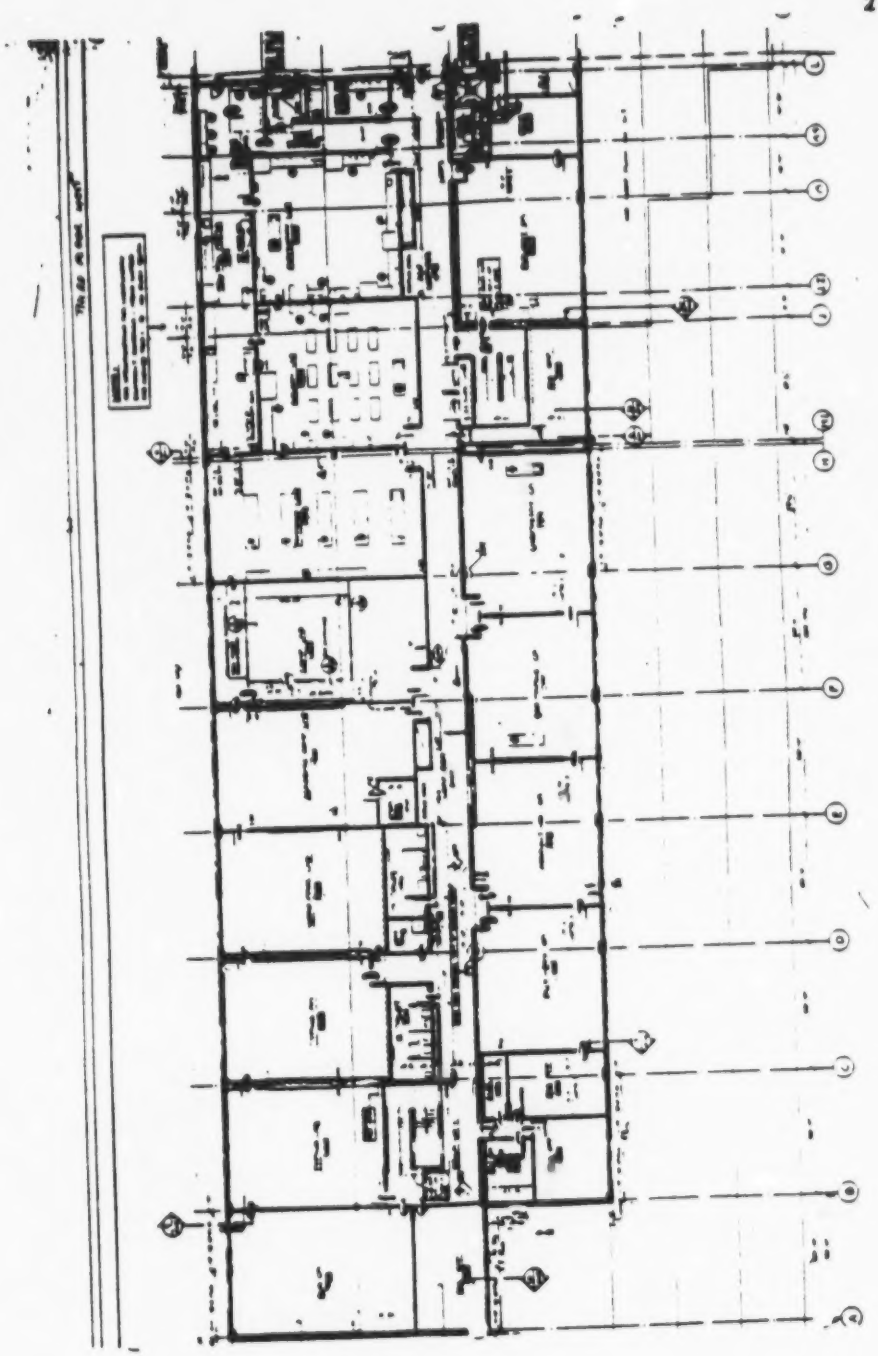

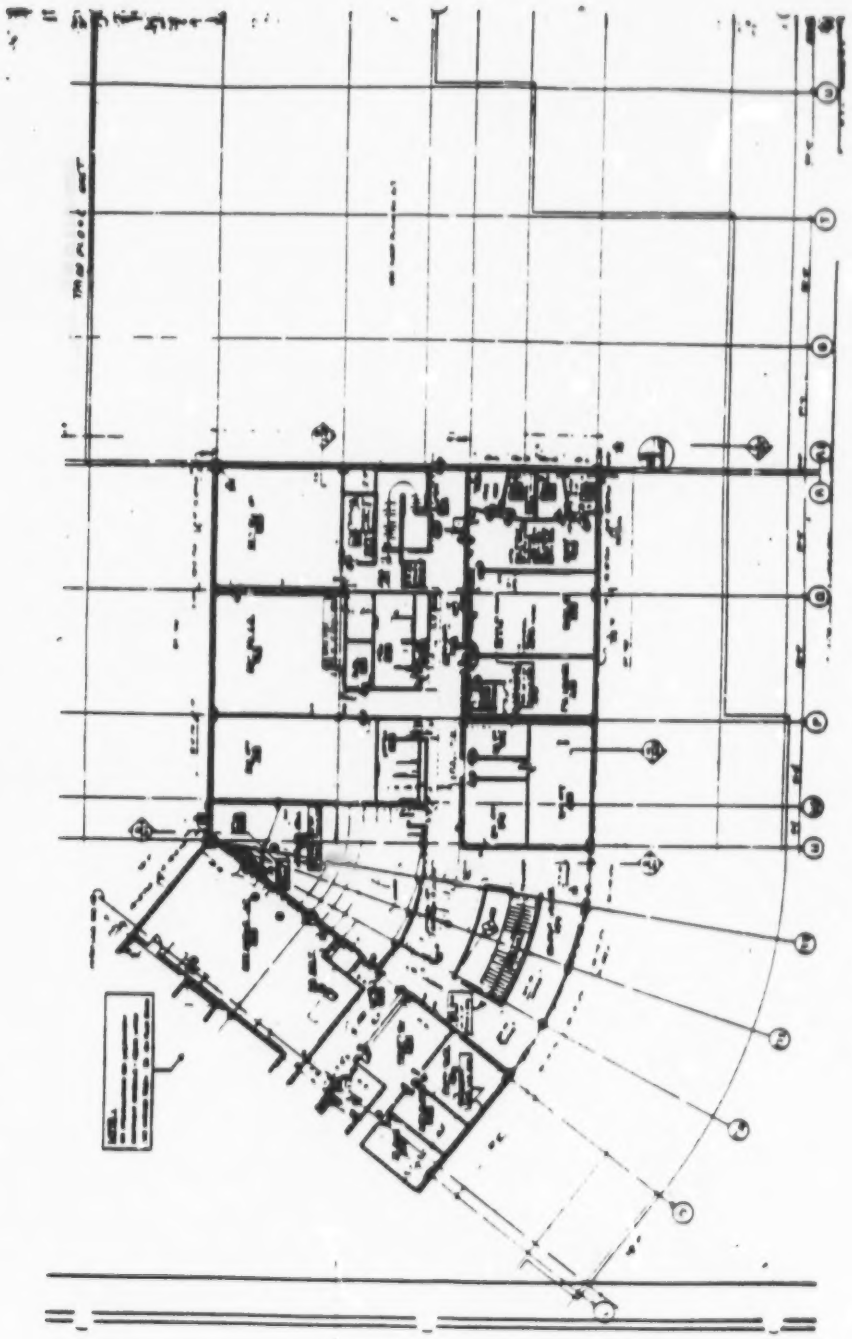

meeting notes

APPENDIX I9

erf+a

DESIGNER MEETING NOTES (5/14/82)

date: 14 May 1982

project: North Shore Community College - Lynn Campus

project no: 7910.04

prepared by: D. Hocker

Re: Room Specifications Book

present

T. Neylon	- NSCC	S. Rozas	- ERF+A
D. Adams	- NSCC	D. Hocker	- ERF+A
L. Picciuolo	- RGV		
L. Dematttia	- RGV		
E. Pendoley	- RGV		
O. Critchlow	- RGV		
P. Pagnotti	- RGV		

ERF+A expressed the following concerns:

A. Equipment, furniture, etc. should be by the same manufacturer if of the same type and function.

B. Rough sketch layouts as presented need to be updated to present plans and drawn to scale. We cannot properly locate doors, walls, mechanical, plumbing or electrical rough-ins without accurate equipment locations.

C. ERF+A recommends that NSCC have a full time person in charge of equipment selection, co-ordination and layout. Many future problems can be avoided if time is spent now to do a thorough job.

D. Some areas are lacking in information. We will need this data as soon as possible.

Items covered on a room-by-room basis:

1. More information is needed on administrative area rooms (first floor west).

2. W224 and W226 demonstration desks - no gas, but will have H&C water and electric service.

3. Lecture Halls E-203 & E-303 need size of rear projection screen. Architect will supply seats.

4. Need location for computer (20 jacks) dedicated rooms. W-223 & W-323 are designated for this.

5. Art Room W-131 (future) location for small electric kilns (2) to be in alcove area near windows.

6. Miscellaneous sinks - must decide if by NSCC as equipment or by ERF+A as built-ins.

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7. G.E.D. Testing W-155 needs acoustical separation (no outside typing noise, etc.).

8. Bound volumes S-182 - what is function of sink?

9. Library Conference Room W-176 & W-177 - 2 zone switching - no dimmers. Use flourescent lights (as per standard C.R.).

10. Library Circulation Desk - who buys? NSCC or in General Contract. ERF+A recommends it be a NSCC equipment purchase.

11. Cafeteria location above Library - acoustical separation. ERF+A to check with BB&N.

12. Library - ERF+A will look at lighting layout in reference to stack layout. Plan is to provide for flexibility.

13. Bleachers are not in ERF+A budget.

14. Delete window to A.V. Studio from Gym (at 2nd level).

15. Room E-139 - provide for folding partition, possibly a light-weight vinyl-accordian type.

16. E-139 - Acoustical separation to be provided from Library.

17. EMT Mechanical Laboratory W-207 - ceiling mounted electrical distribution system to be provided.

18. Computer Des. W-206 - no computer floor, use vinyl tile. More information is forthcoming.

19. Central Sci. W-208 - central T.V. antenna system will be provided.

20. Central Sci. - omit sliding glass access panels. Put 10" round glass into doors to labs.

21. Service elevator (near science room) - door is 3'-6" wide. Normal doors (standard) are 3'-0", doors to elevator passage are 3'-6" wide. NSCC to advise if this is adequate for all equipment.

22. W-209, Industrial Mechanical Laboratory - hood exhausts to have central control panel with indicator lights.

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NORTH SHORE COMMUNTIY COLLEGE
LYNN CAMPUS
MEETING NOTES
14 May 1982

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23. W-209 - what is "safety" flooring?

24. W-210 - lab tables - permanent locations. Electrical services to be from floor.

25. W-224 - reverse plan to that of typical C.R. orientation (also W-226).

26. E-212 & E-213 - reverse Janitor & Electric Rooms (also E-308 & E-310).

27. E-206 - delete special A.C. requirements.

28. Classrooms - no carpet except as requested. Carpet for Rooms E-231, E-232, E-233, E-234 & E-235.

29. E-234 & E-235 - 10 carrels per room.

30. W-201 - treat like typical C.R.

31. W-303, 304, 305, and 306 - to have carpet.

32. Delete vision panels between W-303, 304 & 305.

33. Omit sinks in W-304, W-305. Room W-303 to have sink.

34. Orient Typing Room W-303 plan in standard direction.

35. W-304, - orient plan as shown on NSCC information.

36. W-304, 305, 306 to have undercarpet flat wire.

37. ERF+A recommended that a liquid-chalk writing system not be used except for small areas.

Meeting to be continued next Thursday, 20 May 1982 at 9:00 a.m. at ERF+A office. Laboratory requirements will be discussed.

cc: T. Neylon
L. Picciuolo
B. Doherty
DCPO
S. Rozas

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APPENDIX 20

ACADEMIC PROGRAMS AT LYNN CAMPUS 1985-86

Listing of Academic Programs
Offered at NEW LYNN CAMPUS
1985-86 School Year

TRANSFER

Liberal Arts
Liberal Arts/General Studies
Liberal Arts/Business Administration
Engineering Science Pre-Engineering

CAREER

Allied Health

*Occupational Safety & Health Technology

Business Sciences

Business Computer Programming
Business Career
Executive Secretary
Medical Secretary
Office Information Processing
Office Assistant Certificate
Word Processing Assistant Certificate

Human Services

Drug & Alcohol Rehabilitation/Alcohol Counseling
Gerontology Certificate
* Mental Retardation Certificate
Recerational Certificate
*Family Day Care Certificate
Early Childhood Education

Industrial Technologies

Electro-Mechanical Technology
Manufacturing-Engineering Technology (2 building options)
*Drafting Technology (CAD)
*Energy Systems Technology
Electronic Technician Certificate

General Education

Motivation

*Proposed New Programs

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APPENDIX 21

BUDGET TRANSFER FOR LIBRARY BOOKS (8/28/84)

ACCOUNT ACTIVITY REQUEST
Form BB-31 4 82

BUDGET BUREAU Commonwealth of Massachusetts

Agency I.D. Code 593 Daily Statement Code 1006 Date 8-28-84 Control Number

Agency North Shore Community College

New account number requested 7070-8814 Account number to summarize into 7070-8000

Effective Date 8-28-84 Expiration Date 6-30-85

Account Title Purchase & Install. of Certain Equip for Inst. of Higher Education

Description of new account and/or reason for activity Allocate $30,000. from Board of Regents account #7070-8812 to a new account # 7070-8814 & place this account #7070-8814 under the jurisdiction & control of North Shore Community College for the purchase of library books & related materials $30,000.

Position numbers and titles affected, if any N A

If this request for an account/activity is for a federal grant, please attach the approved AF-G1 and the notification of grant award, and complete the following:

Amount of award $ _____ Duration From _____ to _____

Payment schedule _____

Other financial terms and conditions _____

The Comptroller is authorized to charge this account if it is a non-budgetary or non-assessment account for the costs of fringe benefits, indirect costs, and space use costs that are applicable to this account. Charges will be made in accordance with procedures established by the Commissioner of Administration, and M.G.L. c.29, s. 5B.

Authorized Signature _____

The Budget Director shall not assign an account number unless and until this form has been completed and certified by the Agency Head.

DO NOT WRITE BELOW THIS LINE

BUDGET BUREAU APPROVAL _____ DATE _____ NEW ACCT. / TR ACCT #

PERSONNEL APPROVAL _____ DATE _____ NEW REVENUE ACCT #

ENTERED INTO A/D FILE _____ DATE _____ REVENUE ACCT. CODE

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BOARD OF REGENTS OF HIGHER EDUCATION
ROOM 616, McCORMACK BUILDING
ONE ASHBURTON PLACE
BOSTON, MASSACHUSETTS 02108-1696

May 11, 1984

RE: Item 7070-6810 of Section 2
Chapter 573, Acts of 1980
Furnishings and Equipment
Appropriation $1,000,000

Honorable Chester G. Atkins
Chairman
Senate Committee on Ways and Means
State House, Room 212
Boston, MA 02133

Dear Mr. Chairman:

Enclosed for your convenience is a copy of your approved schedule for the allocation of the referenced appropriation. There were two prior allocations of $76,000 and $151,391 for Middlesex Community College and Southeastern Massachusetts University respectively.

The contingency of $202,800 is as yet unallocated. Please be informed that it is our intent, in accordance with the provisions stipulated in the Reserve, that a sum of $130,000 be allocated to North Shore Community College for the acquisition of library books for the Lynn Campus, and the remaining $72,800 be allocated to the Board of Regents for furnishings and equipment.

Sincerely,

Joseph M. Finnegan
Associate Commissioner for Fiscal Affairs
and Management

JMF:ap

Enclosure

cc: Dr. Gerard T. Indelicato

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